



**KENTUCKY  
POWER**

A unit of American Electric Power

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AUG 16 2010

PUBLIC SERVICE  
COMMISSION

Kentucky Power  
P O Box 5190  
101A Enterprise Drive  
Frankfort, KY 40602  
KentuckyPower.com

Jeff R. Derouen, Executive Director  
Kentucky Public Service Commission  
P. O. Box 615  
211 Sower Boulevard  
Frankfort, KY 40602

August 16, 2010

Dear Mr. Derouen:

Re:

Case No. 2010-00333

In the Matter of the Joint Application Pursuant to 1994 House Bill No. 501 for the Approval of Kentucky Power Company Collaborative Demand-Side Management Programs, and for Authority to Implement a Tariff to Recover Costs, Net Lost Revenues and Receive Incentives associated with the Implementation of the Kentucky Power Company Collaborative Demand-Side Management Programs.

Pursuant to the Commission's Order dated May 22, 1996, enclosed are an original and ten copies of the Joint Applicants' status report. This report describes the operation and progress of the Demand-Side Management Plan.

The Joint Applicants, with the exception of the Office of the Attorney General's representative who abstained, seek authority for Kentucky Power Company, in conjunction with its utility services and pursuant to the 1994 House Bill No. 501, to implement the enclosed revised electric tariff to recover costs associated with the implementation of demand-side management programs, which include net lost revenues and incentives related to those programs.

In this filing, the DSM Collaborative is requesting Commission approval to increase annual participation levels for the resistant heat replacement and non-resistant heat replacements customers in the High Efficiency Heat Pump Program from 100 to 196 and from 250 to 524 respectively. The increase in participants is due to the overwhelming customer support of the program.

Also included in this filing, the DSM Collaborative has projected the 4<sup>th</sup> quarter participant and budgetary levels for the three new DSM programs approved by the Commission on August 20, 2010 (Case No. 2010-00095). In our previous DSM filing (Case No. 2010-00067), the Commission Staff questioned the possible double funding of projects in the Targeted Energy Efficiency Program. After our conversation, the Company requested that each Community Action Agency provide a copy of Kentucky Housing Corporation Form (WX-710) which shows both the total material and labor costs for each individual job along with the material and labor costs funded by Kentucky Power.

Jeff R. Derouen  
August 16, 2010  
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The revised DSM Adjustment clause factor for the residential sector has been agreed upon and is proposed by the DSM Collaborative (see Exhibit C, Column 4, Line 13). - The proposed factor for the residential sector is the midpoint between the ceiling and the floor calculations as demonstrated on Exhibit C. The floor was calculated by taking the Collaborative's projected remaining fourth quarter position (see Exhibit C, Column 4, Line 2) and dividing by the adjusted estimated sector KWH sales for the remaining fourth quarter (see Exhibit C, Column 4, Line 11). The ceiling was calculated by taking the Collaborative's projected remaining fourth quarter position (see Exhibit C, Column 4, Line 4) and dividing by the adjusted estimated sector KWH sales for the remaining fourth quarter (see Exhibit C, Column 4, Line 11).

The revised DSM Adjustment clause factor for the commercial sector has been agreed upon and is proposed by the DSM Collaborative (see Exhibit C, Column 4, Line 26), - The proposed factor for the commercial sector is the midpoint between the ceiling and the floor calculations as demonstrated on Exhibit C. The floor was calculated by taking the Collaborative's projected remaining fourth quarter position (see Exhibit C, Column 4, Line 16) and dividing by the adjusted estimated sector KWH sales for the remaining fourth quarter (see Exhibit C, Column 4, Line 24). The ceiling was calculated by taking the Collaborative's projected remaining fourth quarter position (see Exhibit C, Column 4, Line 18) and dividing by the adjusted estimated sector KWH sales for the remaining fourth quarter (see Exhibit C, Column 4, Line 24).

The Joint Applicants request the Commission to approve the following:

- (1) The DSM Electric Tariff to become effective September 28, 2010. This will allow the Company to utilize the new residential and commercial factor with the first billing cycle in October 2010.

As is customary, the Company requests the Commission return a stamped copy of the revised tariff sheet upon arrival. If you have any questions, please contact me at (502) 696-7010.

Sincerely,



Errol K. Wagner  
Director of Regulatory Services

Enclosure

**TARIFF D.S.M.C.  
 (DEMAND-SIDE MANAGEMENT ADJUSTMENT CLAUSE) (Cont'd.)**

**RATE. (Cont'd.)**

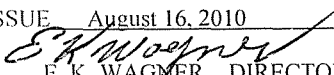
5. The DSM adjustment shall be filed with the Commission ten (10) days before it is scheduled to go into effect, along with all the necessary supporting data to justify the amount of the adjustments, which shall include data, and information as may be required by the Commission.
6. Copies of all documents required to be filed with the Commission under this regulation shall be open and made available for public inspection at the office of the Public Service Commission pursuant to the provisions of KRS 61.870 to 61.884.
7. The resulting range for each customer sector per KWH during the three-year Experimental Demand-Side Management Plan is as follows:

		<u>CUSTOMER SECTOR</u>			
		<u>RESIDENTIAL</u> (\$ Per KWH)	<u>COMMERCIAL</u>	<u>INDUSTRIAL*</u>	
Floor Factor	=	0.001144	0.000000	- 0 -	( I )
Ceiling Factor	=	0.002079	0.000124	- 0 -	( I ) ( I )

8. The DSM Adjustment Clause factor (\$ Per KWH) for each customer sector which fall within the range defined in Item 7 above is as follows:

		<u>CUSTOMER SECTOR</u>			
		<u>RESIDENTIAL</u>	<u>COMMERCIAL</u>	<u>INDUSTRIAL*</u>	
<u>DSM (c)</u>		993,855	21,654	- 0 -	( R ) ( I )
S (c)		616,627,000	350,484,400	- 0 -	( R ) ( I )
Adjustment Factor	\$	0.001612	0.000062	- 0 -	( I ) ( I )

\*The Industrial Sector has been discontinued pursuant to the Commission's Order dated September 28, 1999.

DATE OF ISSUE August 16, 2010 EFFECTIVE DATE Service rendered on or after September 28, 2010  
 ISSUED BY  E. K. WAGNER DIRECTOR OF REGULATORY SERVICES FRANKFORT, KENTUCKY  
 NAME TITLE ADDRESS



**KENTUCKY POWER COMPANY**  
**Demand Side Management**  
**Status Report**  
As of June 30, 2010

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## DEFINITIONS

- |                |   |
|----------------|---|
| 1) YTD Costs   | - Year-to-Date costs recorded January 1, 2010 through June 30, 2010.      |
| 2) YTD Impacts | - Estimated in place load impacts for Year-to-Date participants.          |
| 3) PTD Costs   | - Costs recorded from the inception of the program through June 30, 2010. |
| 4) PTD Impacts | - Estimated in place load impacts for Program-to-Date participants.       |

## COMMENTS

Our calculations are based on actual participants and costs as of June 30, 2010. The Residential DSM costs in this status report do not agree with the total costs in the Financial Report due to a one month lag in reporting.

The estimated actual in-place energy (kWh) savings is the summation of the monthly average net energy savings associated with participating customers of each DSM program (including T&D losses). The average monthly net energy savings is the product of 1/12 of the annual kWh per participant (shown in Exhibit E) and 1/2 of the new participants for the current month, plus the cumulative participants from the previous months. The average monthly net energy savings is then increased by 10% to include T&D losses. The estimated actual in-place energy (kWh) savings are calculated in accordance with the Sunset Provision contained in the joint application, filed September 27, 1995.

The estimated anticipated peak demand (kW) reduction is a product of the number of net participating customers (excluding free riders) and projected winter/summer demand reductions filed for each program (refer to Section III to V of the joint application). The anticipated peak demand (kW) reductions includes 11% T&D loss savings.

The calculation of YTD and PTD estimated in place energy (kWh) savings and anticipated peak demand (kW) reductions contained in this status report reflect, wherever applicable, the program evaluation results of each individual program as described in the August 16, 1999, June 30, 2002, June 30, 2005, June 30, 2008 and June 30, 2010 DSM collaborative report.

The individual DSM lost revenue, efficiency incentive and maximizing incentives as of June 30, 1997 are calculated based on the initial values from Exhibit E in the joint application, filed September 27, 1995. A retroactive adjustment of the initial values of the efficiency incentives and net lost revenue KWH impacts was used for each program for the first eighteen months (1/1/96 to 6/30/97). The lost revenue, efficiency incentive and maximizing incentive for the period 1/1/10 to 06/30/10 are calculated using the revised values contained in Schedule C of this status report.

The program lost revenue is the product of the number of participating customers, the average net energy savings (kWh) per customer and the net lost revenue (\$/kWh). The number of participating customers is equal to 1/2 of the new participants for the current month, plus the cumulative participants from the previous months. The program-to-date lost revenues are calculated in accordance with the Sunset Provision contained in the joint application, filed September 27, 1995.

The efficiency incentive is the product of the number of participants for the month and the efficiency rate (\$/participant). The maximizing incentive is calculated as 5% of actual program cost for the month.

KENTUCKY POWER COMPANY  
SUMMARY INFORMATION (ALL PROGRAMS)  
As of June 30, 2010

DESCRIPTION	YTD	PTD
Total Revenue Collected	<u>\$908,736</u>	<u>\$15,594,968</u>
Total Program Costs	728,571	11,111,745
Total Lost Revenues	166,495	3,870,575
Total Efficiency / Maximizing Incentive	125,987	1,169,711
HEAP - Kentucky Power's Information Technology Implementation Costs (Case No 2006 - 00373, Dated December 14, 2006)	0	58,968
HEAP - KACA's Information Technology Implementation Costs	<u>0</u>	<u>15,700</u>
Total DSM Costs As of June 30, 2010	<u>\$1,021,053</u>	<u>\$16,226,699</u>



DESCRIPTION	YTD		PTD	
Actual In-Place Energy Savings:	1,507,395	kWh	582,076,012	kWh
w/ T&D Line Losses:	1,658,134	kWh	640,283,613	kWh
Total kW Reductions:				
Winter	1,024		21,386	
w/ T&D Line Losses:	1,137		23,739	
Summer	266		4,841	
w/ T&D Line Losses:	295		5,373	

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Energy Fitness
PARTICIPANT DEFINITION:	Number of Households
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
New Participants	0	0	0	0	0	0								2,812

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
0	55,360,221	0	0	441	1,932

# KENTUCKY POWER COMPANY



Energy Fitness	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	18,189.00
Equipment/Vendor:	0.00	0.00	665,964.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	0.00	0.00	0.00
Other Costs:	0.00	0.00	960.00
<b>Total Program Costs</b>	<b>0.00</b>	<b>0.00</b>	<b>685,113.00</b>
Lost Revenues:	0.00	(19,322.00)	363,029.00
Efficiency Incentive:	0.00	(46,349.00)	63,482.00
Maximizing Incentive:	0.00	0.00	0.00
<b>Total Costs</b>	<b>0.00</b>	<b>(65,671.00)</b>	<b>1,111,624.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued May 14, 1999.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Targeted Energy Fitness
PARTICIPANT DEFINITION:	Number of Households
CUSTOMER SECTOR:	Residential - Low Income
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
All Electric	6	31	34	40	17	46							174	2,898
Non All Electric	0	2	3	1	10	15							31	1,027

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
341,809	89,337,748	19	85	632	2,839

# KENTUCKY POWER COMPANY



Targeted Energy Efficiency	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	253,327.00
Equipment/Vendor:	205,640.00	0.00	3,030,667.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	0.00	0.00	0.00
Other Costs:	0.00	0.00	9,553.00
<b>Total Program Costs</b>	<b>205,640.00</b>	<b>0.00</b>	<b>3,293,547.00</b>
Lost Revenues:	37,650.00	1,944.00	628,979.00
Efficiency Incentive:	15,348.00	184.00	68,948.00
Maximizing Incentive:	0.00	0.00	123,197.00
<b>Total Costs</b>	<b>258,638.00</b>	<b>2,128.00</b>	<b>4,114,671.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

The Targeted Energy Efficiency Program provides a variety of services, including a home energy audit, weatherization and seal-up to targeted low income customers.

The Equipment / Vendor cost categories includes the cost of labor and materials of measures installed, participant energy education costs and vendor administration costs. The YTD costs are \$202,103 for all-electric and \$3,537 for non-all-electric homes.

The YTD Estimated in Place Energy (kWh) Savings for all-electric participants and non-all-electric participants is 312,183 and 29,626 respectively.

The YTD Anticipated Peak Demand (kW) Reduction summer/winter for all-electric and non-all-electric participants is 17/82 and 2/3 respectively.

The YTD Lost Revenue for all-electric participants and non-all-electric participants is \$31,792 and \$5,858 respectively.

The YTD Efficiency Incentive for all-electric and non-all-electric participants is \$13,436 and \$1,912 respectively.

The projected participant and budgetary level for 2010 is 415 all-electric homes, 78 non-all-electric homes and \$448,025 respectively.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Compact Fluorescent Bulb
PARTICIPANT DEFINITION:	Number of Bulbs Installed
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
New Participants	0	0	0	0	0	0								

Impacts					
Estimated in Place Energy (kWh) Savings		Anticipated Peak Demand (kW) Reduction			
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
0	280,416	0	0	3	3



# KENTUCKY POWER COMPANY



Compact Fluorescent Bulb	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	60.00
Equipment/Vendor:	0.00	0.00	15,021.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	0.00	0.00	0.00
Other Costs:	0.00	0.00	0.00
<b>Total Program Costs</b>	<b>0.00</b>	<b>0.00</b>	<b>15,081.00</b>
Lost Revenues:	0.00	25.00	1,605.00
Efficiency Incentive:	0.00	8.00	433.00
Maximizing Incentive:	0.00	0.00	0.00
<b>Total Costs</b>	<b>0.00</b>	<b>33.00</b>	<b>17,119.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued December 31, 1996.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	High Efficiency Heat Pumps - Retrofit
PARTICIPANT DEFINITION:	Number of Units Installed
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
Resistance	0	0	0	0	0	0							0	1,367
Non Resistance	0	0	0	0	0	0							0	929

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
0	71,026,985	0	0	851	2,995

# KENTUCKY POWER COMPANY



High Efficiency Heat Pumps - Retrofit	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	12,885.00
Equipment/Vendor:	0.00	0.00	129,767.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	0.00	0.00	70,500.00
Other Costs:	0.00	0.00	1,160.00
<b>Total Program Costs</b>	<b>0.00</b>	<b>0.00</b>	<b>214,312.00</b>
Lost Revenues:	0.00	(269.00)	368,960.00
Efficiency Incentive:	0.00	(2,196.00)	48,017.00
Maximizing Incentive:	0.00	0.00	5.00
<b>Total Costs</b>	<b>0.00</b>	<b>(2,465.00)</b>	<b>631,294.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued December 31, 2001.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	High Efficiency Heat Pump - Mobile Home
PARTICIPANT DEFINITION:	Number of Units Installed
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
New Participants	11	22	10	13	29	12							97	2,144

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
144,373	87,167,180	39	78	322	3,684

# KENTUCKY POWER COMPANY



High Efficiency Heat Pump - Mobile Home	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	46,374.00
Equipment/Vendor:	14,450.00	0.00	58,455.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	26,500.00	0.00	920,400.00
Other Costs:	0.00	0.00	1,167.00
<b>Total Program Costs</b>	<b>40,950.00</b>	<b>0.00</b>	<b>1,026,396.00</b>
Lost Revenues:	15,834.00	5,820.00	454,547.00
Efficiency Incentive:	13,579.00	18,331.00	166,369.00
Maximizing Incentive:	0.00	0.00	0.00
<b>Total Costs</b>	<b>70,363.00</b>	<b>24,151.00</b>	<b>1,647,312.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

The High Efficiency Heat Pump - Mobile Home program provides incentives to customers, encouraging them to install the highest efficiency equipment practical.

The projected participant and budgetary level for 2010 is 150 and \$67,500 respectively.



# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Mobile Home New Construction
PARTICIPANT DEFINITION:	Number of Units Installed
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
Heat Pump	23	11	10	17	27	27							115	2,026
Air Conditioner	0	0	0	0	0	0							0	2

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
169,669	127,971,938	74	170	526	4,911

# KENTUCKY POWER COMPANY



Mobile Home New Construction	
Reporting Period:	January - June 2010

Costs				
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date	
Total Evaluation	0.00	0.00	30,294.00	
Equipment/Vendor:	5,450.00	0.00	123,963.00	
Promotional:	0.00	0.00	3,939.00	
Customer Incentives:	55,000.00	0.00	1,020,950.00	
Other Costs:	250.00	0.00	4,616.00	
<b>Total Program Costs</b>	<b>60,700.00</b>	<b>0.00</b>	<b>1,183,762.00</b>	
Lost Revenues:	23,264.00	0.00	517,862.00	
Efficiency Incentive:	4,462.00	0.00	144,503.00	
Maximizing Incentive:	0.00	0.00	2,580.00	
<b>Total Costs</b>	<b>88,426.00</b>	<b>0.00</b>	<b>1,848,707.00</b>	

# KENTUCKY POWER COMPANY



## COMMENTS:

The Collaborative has devised and implemented a plan in conjunction with trade allies to offer a financial incentive to new mobile home buyers and trade allies to encourage the installation of high efficiency heat pumps and upgraded insulation packages in new mobile homes.

The projected participant and budgetary level for 2010 is 170 heat pumps and \$93,500 respectively.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Modified Energy Fitness
PARTICIPANT DEFINITION:	Number of Audits
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
New Participants	57	63	91	76	73	141							501	6,291

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
360,430	81,490,629	88	279	936	3,679

# KENTUCKY POWER COMPANY



Modified Energy Fitness	
Reporting Period:	January - June 2010

Costs				
Description		Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation		0.00	0.00	27,106.00
Equipment/Vendor:		196,836.00	0.00	2,319,921.00
Promotional:		0.00	0.00	0.00
Customer Incentives:		0.00	0.00	0.00
Other Costs:		0.00	0.00	0.00
Total Program Costs		196,836.00	0.00	2,347,027.00
Lost Revenues:		52,204.00	0.00	586,130.00
Efficiency Incentive:		24,935.00	0.00	255,745.00
Maximizing Incentive:		0.00	0.00	0.00
Total Costs		273,975.00	0.00	3,188,902.00

# KENTUCKY POWER COMPANY



## COMMENTS:

The Modified Energy Fitness program provides energy audits, blower door testing, duct sealing and direct installation of low cost conservation measures to residential customers with electric space heating and electric water heating.

The equipment / vendor cost category includes the cost of labor and materials of measures installed, the cost of promotion by the vendor and vendor administration costs.

The projected participant and budgetary level for 2010 is 1,200 and \$480,000 respectively.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	High Efficiency Heat Pump
PARTICIPANT DEFINITION:	Number of Units Installed
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
Resistance	9	21	12	16	17	22							97	188
Non Resistance	50	42	28	44	58	50							272	489

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
526,318	1,365,961	71	446	128	846

# KENTUCKY POWER COMPANY



High Efficiency Heat Pump	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	0.00
Equipment/Vendor:	17,450.00	0.00	32,750.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	139,550.00	0.00	262,700.00
Other Costs:	0.00	0.00	0.00
<b>Total Program Costs</b>	<b>157,000.00</b>	<b>0.00</b>	<b>295,450.00</b>
Lost Revenues:	15,592.00	0.00	23,157.00
Efficiency Incentive:	46,376.00	0.00	89,883.00
Maximizing Incentive:	5,668.00	0.00	10,543.00
<b>Total Costs</b>	<b>224,636.00</b>	<b>0.00</b>	<b>419,033.00</b>



# KENTUCKY POWER COMPANY



## COMMENTS:

This program was implemented to reduce residential electric consumption by replacing older, less efficient electric heating systems with high efficiency heat pumps. Customers are provided an incentive encouraging them to promote the highest efficiency equipment practical.

The YTD Estimated in Place Energy (kWh) Savings for resistance heat replacement and non-resistance heat replacement participants is 330,165 and 196,153 respectively.

The YTD Anticipated Peak Demand (kW) Reduction summer/winter for resistance heat replacement and non-resistance heat replacement participants is 0/312 and 71/134 respectively.

The YTD Loss Revenue for resistance heat replacement and non-resistance heat replacement participants is \$11,032 and \$4,560 respectively.

The Efficiency Incentive for resistance heat replacement participants is \$46,376. The Maximizing Incentive for the non-resistance heat replacement participants is \$5,668.

The revised projected participant and budgetary level for 2010 is 196 resistance heat replacement customers, 524 non-resistance heat replacement customers and \$324,000 respectively.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Community Outreach Compact Fluorescent Lamp
PARTICIPANT DEFINITION:	Number of Customers
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
New Participants	0	0	419	342	1,164	718							2,643	6,387

Impacts					
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction		
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
98,917	342,012	3	67	7	163

# KENTUCKY POWER COMPANY



Community Outreach Compact Fluorescent Lamp	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	8,806.00	0.00	8,806.00
CFLs	32,023.00	0.00	59,480.00
Promotional:	1,735.00	0.00	8,397.00
Administration	0.00	0.00	0.00
Other Costs:	0.00	0.00	0.00
<b>Total Program Costs</b>	<b>42,564.00</b>	<b>0.00</b>	<b>76,683.00</b>
Lost Revenues:	17,848.00	0.00	28,502.00
Efficiency Incentive:	13,189.00	0.00	31,872.00
Maximizing Incentive:	0.00	0.00	0.00
<b>Total Costs</b>	<b>73,601.00</b>	<b>0.00</b>	<b>137,057.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

The Community Outreach Compact Fluorescent Lighting (CFL) program is designed to educate and influence residential customers to purchase and use compact fluorescent lighting in their homes.

The projected participant and budgetary level for 2010 is 4,800 customers and \$56,000 respectively.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Energy Education For Students
PARTICIPANT DEFINITION:	Number of Students
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
New Participants	75	0	112	0	58	243							488	1,618

Impacts						
Estimated in Place Energy (kWh) Savings			Anticipated Peak Demand (kW) Reduction			
YTD	PTD		YTD		PTD	
			Summer	Winter	Summer	Winter
16,618	87,913		1	12	2	41

# KENTUCKY POWER COMPANY



Energy Education For Students	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	4,179.00	0.00	4,179.00
CFLs	15,702.00	0.00	27,886.00
Promotional:	0.00	0.00	0.00
Educational Workshops	5,000.00	0.00	10,000.00
Program Development & Administration	0.00	0.00	0.00
<b>Total Program Costs</b>	<b>24,881.00</b>	<b>0.00</b>	<b>42,065.00</b>
Lost Revenues:	4,103.00	0.00	6,346.00
Efficiency Incentive:	2,430.00	0.00	8,057.00
Maximizing Incentive:	0.00	0.00	0.00
<b>Total Costs</b>	<b>31,414.00</b>	<b>0.00</b>	<b>56,468.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

The Energy Education for Students program is designed to partner with the National Energy Education Development Project (NEED) to implement an energy education program for 7th grade students at participating middle schools. The students will be provided a package of four 23 watt CFLs to install in their homes. The program will influence residential customers to purchase and use compact fluorescent lighting in their homes.

The projected participant and budgetary level for 2010 is 1,700 students and \$31,000 respectively.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Smart Audit - Commercial
PARTICIPANT DEFINITION:	Number of Audits
CUSTOMER SECTOR:	Commercial
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
Class I	0	0	0	0	0	0							0	1,952
Class II	0	0	0	0	0	0							0	194

Impacts					
Estimated in Place Energy (kWh) Savings		Anticipated Peak Demand (kW) Reduction			
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
n/a	n/a	n/a	n/a	n/a	n/a



# KENTUCKY POWER COMPANY



Smart Audit - Commercial	
Reporting Period:	January - June 2010

Costs				
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date	
Total Evaluation	0.00	0.00	30,661.00	
Equipment/Vendor:	0.00	0.00	1,268,176.00	
Promotional:	0.00	0.00	0.00	
Customer Incentives:	0.00	0.00	0.00	
Other Costs:	0.00	0.00	(8,156.00)	
<b>Total Program Costs</b>	<b>0.00</b>	<b>0.00</b>	<b>1,290,681.00</b>	
Lost Revenues:	0.00	0.00	0.00	
Efficiency Incentive:	0.00	0.00	0.00	
Maximizing Incentive:	0.00	0.00	64,533.00	
<b>Total Costs</b>	<b>0.00</b>	<b>0.00</b>	<b>1,355,214.00</b>	

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued December 31, 2002.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Smart Incentive - Commercial
PARTICIPANT DEFINITION:	Number of Incentives
CUSTOMER SECTOR:	Commercial
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
Existing Building	0	0	0	0	0	0							0	182
New Building	0	0	0	0	0	0							0	69

Impacts					
Estimated in Place Energy (kWh) Savings		Anticipated Peak Demand (kW) Reduction			
YTD	PTD	YTD		PTD	
		Summer	Winter	Summer	Winter
0	125,682,085	0	0	1,519	2,640

# KENTUCKY POWER COMPANY



Smart Incentive - Commercial	
Reporting Period:	January - June 2010

Costs			
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation	0.00	0.00	144,039.00
Equipment/Vendor:	0.00	0.00	21,504.00
Promotional:	0.00	0.00	0.00
Customer Incentives:	0.00	0.00	399,592.00
Other Costs:	0.00	0.00	691.00
<b>Total Program Costs</b>	<b>0.00</b>	<b>0.00</b>	<b>565,826.00</b>
Lost Revenues:	0.00	442.00	891,458.00
Efficiency Incentive:	0.00	1,078.00	88,039.00
Maximizing Incentive:	0.00	0.00	281.00
<b>Total Costs</b>	<b>0.00</b>	<b>1,520.00</b>	<b>1,545,604.00</b>

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued December 31, 2002.

# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Smart Audit - Industrial
PARTICIPANT DEFINITION:	Number of Audits
CUSTOMER SECTOR:	Industrial
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
Class I	0	0	0	0	0	0							0	60
Class II	0	0	0	0	0	0							0	4

Impacts					
Estimated in Place Energy (kWh) Savings		Anticipated Peak Demand (kW) Reduction			
		YTD		PTD	
YTD	PTD	Summer	Winter	Summer	Winter
n/a	n/a	n/a	n/a	n/a	n/a

# KENTUCKY POWER COMPANY



Smart Audit - Industrial	
Reporting Period:	January - June 2010

Costs				
Description		Year-To-Date	Retroactive Adjustment	Program-To-Date
Total Evaluation		0.00	0.00	5,741.00
Equipment/Vendor:		0.00	0.00	37,786.00
Promotional:		0.00	0.00	0.00
Customer Incentives:		0.00	0.00	0.00
Other Costs:		0.00	0.00	161.00
Total Program Costs		0.00	0.00	43,688.00
Lost Revenues:		0.00	0.00	0.00
Efficiency Incentive:		0.00	0.00	0.00
Maximizing Incentive:		0.00	0.00	2,186.00
Total Costs		0.00	0.00	45,874.00

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued December 31, 1998.



# KENTUCKY POWER COMPANY



PROGRAM INFORMATION	
PROGRAM:	Smart Incentive - Industrial
PARTICIPANT DEFINITION:	Number of Incentives
CUSTOMER SECTOR:	Residential
REPORTING PERIOD:	January - June 2010

2010														
Participant	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	YTD	PTD
General	0	0	0	0	0	0							0	1
Compressed Air	0	0	0	0	0	0							0	0

Impacts					
Estimated in Place Energy (kWh) Savings		Anticipated Peak Demand (kW) Reduction			
		YTD		PTD	
YTD	PTD	Summer	Winter	Summer	Winter
0	170,525	0	0	6	6

# KENTUCKY POWER COMPANY



Smart Incentive - Industrial	
Reporting Period:	January - June 2010

Costs				
Description	Year-To-Date	Retroactive Adjustment	Program-To-Date	
Total Evaluation	0.00	0.00	28,385.00	
Equipment/Vendor:	0.00	0.00	3,288.00	
Promotional:	0.00	0.00	0.00	
Customer Incentives:	0.00	0.00	441.00	
Other Costs:	0.00	0.00	0.00	
Total Program Costs	0.00	0.00	32,114.00	
Lost Revenues:	0.00	0.00	0.00	
Efficiency Incentive:	0.00	0.00	383.00	
Maximizing Incentive:	0.00	0.00	655.00	
Total Costs	0.00	0.00	33,152.00	

# KENTUCKY POWER COMPANY



## COMMENTS:

This program was discontinued December 31, 1998.



KENTUCKY POWER COMPANY		Exhibit C				
DERIVATION OF 3 SECTOR SURCHARGES FOR 3 YR EXPERIMENT					PAGE 1 of	18
RESIDENTIAL SECTOR		TOTAL YEARS 1 thru 14	YEAR 15 (2010) 1st HALF	YEAR 15 (2010) 3rd QTR	YEAR 15 (2010) 4th QTR	TOTAL
		(1)	(2)	(3)	(4)	(5)
1	CURRENT PERIOD AMOUNT TO BE RECOVERED	\$12,267,626	\$1,021,053	\$471,612	\$576,474	\$14,336,765
2	CUMULATIVE ( OVER)/UNDER COLLECTION	0	519,414	631,731	705,618	0
3	18 MOS. RETROACTIVE(OVER)/UNDER ADJUSTMENT	(41,824)	0	0	0	(41,824)
4	TOTAL TO BE RECOVERED	12,225,802	1,540,467	1,103,343	1,282,092	14,294,941
5	TOTAL AMOUNT RECOVERED	11,706,042	908,736	0	0	12,614,778
6	EXPECTED FUTURE RECOVERIES	0	0	397,725	994,003	1,391,728
7	TRANSFER PORTION OF BALANCE FROM INDUSTRIAL	(9,833)	0	0	0	(9,833)
8	TRANSFER PORTION OF BALANCE FROM COMMERCIAL	9,487	0	0	0	9,487
9	(OVER)/UNDER COLLECTION TO BE REFUNDED	\$519,414	\$631,731	\$705,618	\$288,089	\$288,089
10	AMOUNT TO BE RECOVERED				\$1,282,092	
11	ADJ. ESTIMATED SECTOR KWH - YEAR 15			559,388,800	616,627,200	
SURCHARGE RANGE ( \$ PER KWH )						
12	FLOOR (CARRYOVER)	COL. 5, L 2 / COL. 5, L 11			0.001144	
13	MIDPOINT - proposed rate			0.000711	0.001612	
14	CEILING (TOTAL COST)	COL. 5, L 4 / COL. 5, L 11			0.002079	
COMMERCIAL SECTOR		TOTAL YEARS 1 thru 14	YEAR 15 (2010) 1st HALF	YEAR 15 (2010) 3rd QTR	YEAR 15 (2010) 4th QTR	TOTAL
		(1)	(2)	(3)	(4)	(5)
15	CURRENT PERIOD AMOUNT TO BE RECOVERED	\$2,899,298	\$0	\$0	\$43,307	\$2,942,605
16	CUMULATIVE (OVER)/UNDER COLLECTION	0	0	0	0	0
17	18 MOS. RETROACTIVE(OVER)/UNDER ADJUSTMENT	1,520	0	0	0	1,520
18	TOTAL TO BE RECOVERED	2,900,818	0	0	43,307	2,944,125
19	TOTAL AMOUNT RECOVERED	2,888,053	0	0	0	2,888,053
20	EXPECTED FUTURE RECOVERIES	0	0	0	21,730	21,730
21	TRANSFER PORTION OF BALANCE FROM INDUSTRIAL	(3,278)	0	0	0	(3,278)
22	TRANSFER BALANCE TO RESIDENTIAL	(9,487)	0	0	0	(9,487)
22	(OVER)/UNDER COLLECTION TO BE REFUNDED	\$0	\$0	\$0	\$21,577	\$21,577
23	AMOUNT TO BE RECOVERED					
24	ADJ. ESTIMATED SECTOR KWH - YEAR 15			378,117,600	350,484,400	
SURCHARGE RANGE ( \$ PER KWH )						
25	FLOOR (CARRYOVER)				0.000000	
26	MIDPOINT - proposed rate			0.000000	0.000062	
27	CEILING (TOTAL COST)				0.000124	
INDUSTRIAL SECTOR		TOTAL YEARS 1 thru 14	YEAR 15 (2010) 1st HALF	YEAR 15 (2010) 3rd QTR	YEAR 15 (2010) 4th QTR	TOTAL
		(1)	(2)	(3)	(4)	(5)
28	CURRENT PERIOD AMOUNT TO BE RECOVERED	\$79,026	\$0	\$0	\$0	\$79,026
29	CUMULATIVE (OVER)/UNDER COLLECTION	0	0	0	0	0
30	18 MOS. RETROACTIVE(OVER)/UNDER ADJUSTMENT	0	0	0	0	0
31	TOTAL TO BE RECOVERED	79,026	0	0	0	79,026
32	TOTAL AMOUNT RECOVERED	92,137	0	0	0	92,137
33	EXPECTED FUTURE RECOVERIES	0	0	0	0	0
34	TRANSFER BALANCE TO RESIDENTIAL & COMMERCIAL	13,111	0	0	0	13,111
35	(OVER)/UNDER COLLECTION TO BE REFUNDED	\$0	\$0	\$0	\$0	\$0
36	AMOUNT TO BE RECOVERED					\$79,026
37	ADJ. ESTIMATED SECTOR KWH - YEAR 15			818,658,400	890,822,800	890,822,800
SURCHARGE RANGE ( \$ PER KWH )						
38	FLOOR (CARRYOVER)				0.000000	0.000000
39	MIDPOINT				0.000000	0.000000
40	CEILING (TOTAL COST) - proposed rate				0.000000	0.000000

1996

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YR PROGRAM

YEAR 1	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM	NET LOST REV/YR	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE	TOTAL *	TOTAL EST. COSTS TO BE
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/YR (6)	(\$/KWH) (7)	REVENUES (8)	(9)	(5% of COSTS) (10)	INCENTIVE (9)+(10) (11)	RECOVERED (12)
				(1)X(3)		(2)X(5)		(6)X(7)		(4)X(5%)		(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	552	148	\$221.65	\$122,351	2,690	398,120	\$0.03	\$12,397	\$43,177		\$43,177	\$177,925
Targeted Energy Efficiency - All Electric	223	101	\$1,026.88	\$228,994	5,570	562,570	\$0.03	\$17,513	\$0	\$11,450	\$11,450	\$257,957
- Non-All Electric	74	35	\$372.19	\$27,542	680	23,800	\$0.03	\$744	\$719		\$719	\$29,005
Compact Fluorescent Bulb	269	73	\$56.06	\$15,081	62	4,526	\$0.03	\$140	\$425		\$425	\$15,646
High - Efficiency Heat Pump - Resistance Heat	539	216	\$73.49	\$39,611	2,275	491,400	\$0.03	\$15,292	\$10,634		\$10,634	\$65,537
- Non Resistance Heat	527	206	\$61.31	\$32,310	813	167,478	\$0.03	\$5,215	\$8,796		\$8,796	\$46,321
High - Efficiency Heat Pump - Mobile Home	356	158	\$496.95	\$176,914	2,160	341,280	\$0.03	\$10,617	\$13,834		\$13,834	\$201,365
Mobile Home New Construction	70	22	\$292.69	\$20,488	0	0				\$1,024	\$1,024	\$21,512
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>2,610</b>	<b>959</b>		<b>\$663,291</b>		<b>1,989,174</b>		<b>\$61,918</b>	<b>\$77,585</b>	<b>\$12,474</b>	<b>\$90,059</b>	<b>\$815,268</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	91	19	\$1,258.51	\$114,524	0	0			\$0	\$5,726	\$5,726	\$120,250
- Class 2	5	1	\$1,875.40	\$9,377	0	0			\$0	\$469	\$469	\$9,846
Smart Financing - Existing Building	1	0	\$5,794.00	\$5,794	22,000	0	\$0.04	\$0	\$506		\$506	\$6,300
Smart Financing - New Building	0	0		\$0	30,600	0	\$0.04	\$0	\$0	\$0	\$0	\$0
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>97</b>	<b>20</b>		<b>\$129,695</b>				<b>\$0</b>	<b>\$506</b>	<b>\$6,195</b>	<b>\$6,701</b>	<b>\$136,396</b>
<b>INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)</b>												
Smart Audit - Class 1	15	1	\$149.40	\$2,241	0	0			\$0	\$112	\$112	\$2,353
Smart Audit - Class 2	2	1	\$8,980.00	\$17,960	0	0			\$0	\$898	\$898	\$18,858
Smart Financing - General	0	0		\$3,919	28,200	0	\$0.04	\$0	\$0	\$196	\$196	\$4,115
Smart Financing - Compressed Air System	0	0		\$0	164,800	0	\$0.03	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>17</b>	<b>2</b>		<b>\$24,120</b>				<b>\$0</b>	<b>\$0</b>	<b>\$1,206</b>	<b>\$1,206</b>	<b>\$25,326</b>
<b>TOTAL COMPANY</b>	<b>2,724</b>	<b>981</b>		<b>\$817,106</b>		<b>1,989,174</b>		<b>\$61,918</b>	<b>\$78,091</b>	<b>\$19,875</b>	<b>\$97,966</b>	<b>\$976,990</b>

\* Lost revenue and efficiency incentives are based on initial values per the settlement agreement.

1997

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 1997

YEAR 2 ( 1st HALF )	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/6 MOS	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11)	TOTAL EST. COSTS TO BE RECOVERED (12)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT COSTS (3)	(4)	(5)	(6)	(\$/KWH) (7)	REVENUES (8)	(9)	(10)	(11)	(12)
			(1)X(3)	(2)X(5)				(6)X(7)		(4)X( 5%)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	273	651	\$260.68	\$71,167	1,345	875,595	\$0.03	\$27,266	\$21,354	n/a	\$21,354	\$119,787
Targeted Energy Efficiency - All Electric	118	279	\$818.97	\$96,638	2,785	777,015	\$0.03	\$24,188	\$0	\$4,832	\$4,832	\$125,658
- Non-All Electric	26	88	\$88.23	\$2,294	340	29,920	\$0.03	\$935	\$252	n/a	\$252	\$3,481
Compact Fluorescent Bulb	0	269		\$0	31	8,339	\$0.03	\$258	\$0	n/a	\$0	\$258
High - Efficiency Heat Pump - Resistance Heat	123	590	\$2.58	\$317	1,138	671,420	\$0.03	\$20,895	\$2,427	n/a	\$2,427	\$23,639
- Non Resistance Heat	124	581	\$2.56	\$318	407	236,467	\$0.03	\$7,364	\$2,070	n/a	\$2,070	\$9,752
High - Efficiency Heat Pump - Mobile Home	109	403	\$157.87	\$17,208	1,080	435,240	\$0.03	\$13,540	\$4,236	n/a	\$4,236	\$34,984
Mobile Home New Construction	12	78	\$635.17	\$7,622	0	0	n/a	n/a	\$0	\$381	\$381	\$8,003
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>785</b>	<b>2,939</b>		<b>\$195,564</b>		<b>3,033,996</b>		<b>\$94,446</b>	<b>\$30,339</b>	<b>\$5,213</b>	<b>\$35,552</b>	<b>\$325,562</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	243	207	\$264.00	\$64,152	0	0	n/a	n/a	\$0	\$3,208	\$3,208	\$67,360
- Class 2	11	9	\$2,705.00	\$29,755	0	0	n/a	n/a	\$0	\$1,488	\$1,488	\$31,243
Smart Financing - Existing Building	0	1	n/a	\$5,629	11,000	11,000	\$0.04	\$469	\$0	\$281	\$281	\$6,379
Smart Financing - New Building	1	0	\$4,692.00	\$4,692	15,300	0	\$0.04	\$0	\$50	n/a	\$50	\$4,742
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>255</b>	<b>217</b>		<b>\$104,228</b>		<b>11,000</b>		<b>\$469</b>	<b>\$50</b>	<b>\$4,977</b>	<b>\$5,027</b>	<b>\$109,724</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)</b>												
Smart Audit - Class 1	9	20	\$279.56	\$2,516	0	0	n/a	n/a	\$0	\$126	\$126	\$2,642
Smart Audit - Class 2	1	2	\$1,133.00	\$1,133	0	0	n/a	n/a	\$0	\$57	\$57	\$1,190
Smart Financing - General	0	0	n/a	\$7,840	14,100	0	\$0.04	\$0	\$0	\$392	\$392	\$8,232
Smart Financing - Compressed Air System	0	0		\$0	82,400	0	\$0.03	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>10</b>	<b>22</b>		<b>\$11,489</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$575</b>	<b>\$575</b>	<b>\$12,064</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>TOTAL COMPANY</b>	<b>1,050</b>	<b>3,178</b>		<b>\$311,281</b>		<b>3,044,996</b>		<b>\$94,915</b>	<b>\$30,389</b>	<b>\$10,765</b>	<b>\$41,154</b>	<b>\$447,350</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====

\* Lost revenue and efficiency incentives are based on initial values per the settlement agreement.

1997

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YR PROGRAM

YEAR 2 ( 3rd QTR )	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/QTR	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE	TOTAL * INCENTIVE	TOTAL EST. COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT COSTS (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/QTR (6)	(\$/KWH) (7)	REVENUES (8)	(9)	(5% of COSTS) (10)	(11)	(12)
			(1)X(3)			(2)X(5)		(6)X(7)		(4)X( 5%)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	257	957	\$184.99	\$47,542	341	326,337	\$0.03	\$10,156	\$5,340	n/a	\$5,340	\$63,038
Targeted Energy Efficiency - All Electric	51	369	\$1,090.08	\$55,594	1,392	513,648	\$0.03	\$15,980	\$0	\$2,780	\$2,780	\$74,354
- Non-All Electric	15	108	\$193.33	\$2,900	170	18,360	\$0.03	\$574	\$25	n/a	\$25	\$3,499
Compact Fluorescent Bulb	0	269	n/a	\$0	16	4,304	\$0.03	\$133	\$0	\$0	\$0	\$133
High - Efficiency Heat Pump - Resistance Heat	109	717	\$55.05	\$6,000	547	392,199	\$0.03	\$12,213	\$787	n/a	\$787	\$19,000
- Non Resistance Heat	84	695	\$66.18	\$5,559	221	153,595	\$0.03	\$4,786	\$2,445	n/a	\$2,445	\$12,790
High - Efficiency Heat Pump - Mobile Home	77	509	\$689.62	\$53,101	625	318,125	\$0.03	\$9,894	\$2,503	n/a	\$2,503	\$65,498
Mobile Home New Construction	0	82	n/a	\$6,092	0	0			\$0	\$305	\$305	\$6,397
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>593</b>	<b>3,706</b>		<b>\$176,788</b>		<b>1,726,568</b>		<b>\$53,736</b>	<b>\$11,100</b>	<b>\$3,085</b>	<b>\$14,185</b>	<b>\$244,709</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	98	383	\$413.13	\$40,487	0	0			\$0	\$2,024	\$2,024	\$42,511
- Class 2	5	19	\$2,705.00	\$13,525	0	0			\$0	\$676	\$676	\$14,201
Smart Financing - Existing Building	2	2	\$3,067.00	\$6,134	11,100	22,200	\$0.04	\$940	\$1,627	n/a	\$1,627	\$8,701
Smart Financing - New Building	0	1	n/a	\$0	7,650	7,650	\$0.04	\$327	\$0	\$0	\$0	\$327
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>105</b>	<b>405</b>		<b>\$60,146</b>		<b>29,850</b>		<b>\$1,267</b>	<b>\$1,627</b>	<b>\$2,700</b>	<b>\$4,327</b>	<b>\$65,740</b>
<b>INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)</b>												
Smart Audit - Class 1	3	26	\$666.00	\$1,998	0	0			\$0	\$100	\$100	\$2,098
Smart Audit - Class 2	0	3	n/a	\$0	0	0			\$0	\$0	\$0	\$0
Smart Financing - General	0	0	n/a	\$4,785	14,625	0	\$0.04	\$0	\$0	n/a	\$0	\$4,785
Smart Financing - Compressed Air System	0	0		\$0	41,200	0	\$0.04	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>3</b>	<b>29</b>		<b>\$6,783</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$100</b>	<b>\$100</b>	<b>\$6,883</b>
<b>TOTAL COMPANY</b>	<b>701</b>	<b>4,140</b>		<b>\$243,717</b>		<b>1,756,418</b>		<b>\$55,003</b>	<b>\$12,727</b>	<b>\$5,885</b>	<b>\$18,612</b>	<b>\$317,332</b>

\* Lost revenue and efficiency incentives are based on prospective values.



1997

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YR PROGRAM

YEAR 2 ( 4th QTR )	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/QTR	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11) (9)+(10)	TOTAL EST. COSTS TO BE RECOVERED (12) (4)+(8)+(11)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT COSTS (3) (4)	COSTS (4) (1)X(3)	(KWH/PARTIC) (5)	KWH/QTR (6) (2)X(5)	(\$/KWH) (7)	REVENUES (8) (6)X(7)	(9)	(10) (4)X( 5%)	(9)+(10)	(12) (4)+(8)+(11)
RESIDENTIAL PROGRAMS												
Energy Fitness	432	1,287	\$259.53	\$112,115	341	438,867	\$0.03	\$13,658	\$8,977	n/a	\$8,977	\$134,750
Targeted Energy Efficiency - All Electric	124	443	\$924.15	\$114,595	1,393	617,099	\$0.03	\$19,198	\$0	\$5,730	\$5,730	\$139,523
- Non-All Electric	78	146	\$103.55	\$8,077	170	24,820	\$0.03	\$775	\$129	n/a	\$129	\$8,981
Compact Fluorescent Bulb	0	269	n/a	\$0	17	4,573	\$0.03	\$141	\$0	\$0	\$0	\$141
High - Efficiency Heat Pump - Resistance Heat	111	823	\$106.90	\$11,866	547	450,181	\$0.03	\$14,019	\$801	n/a	\$801	\$26,686
- Non Resistance Heat	102	782	\$142.21	\$14,505	221	172,822	\$0.03	\$5,385	\$2,969	n/a	\$2,969	\$22,859
High - Efficiency Heat Pump - Mobile Home	50	565	\$406.70	\$20,335	625	353,125	\$0.03	\$10,982	\$1,625	n/a	\$1,625	\$32,942
Mobile Home New Construction	0	82	n/a	(\$749)	0	0				(\$37)	(\$37)	(\$786)
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>897</b>	<b>4,397</b>		<b>\$280,744</b>		<b>2,061,487</b>		<b>\$64,158</b>	<b>\$14,501</b>	<b>\$5,693</b>	<b>\$20,194</b>	<b>\$365,096</b>
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	71	473	\$230.92	\$16,395	0	0			\$0	\$820	\$820	\$17,215
- Class 2	21	33	\$2,705.00	\$56,805	0	0			\$0	\$2,840	\$2,840	\$59,645
Smart Financing - Existing Building	9	81	\$2,282.56	\$20,543	11,100	88,800	\$0.04	\$3,761	\$7,320	n/a	\$7,320	\$31,624
Smart Financing - New Building	0	1	n/a	\$0	7,650	7,650	\$0.04	\$327	\$0	n/a	\$0	\$327
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>101</b>	<b>515</b>		<b>\$93,743</b>		<b>96,450</b>		<b>\$4,088</b>	<b>\$7,320</b>	<b>\$3,660</b>	<b>\$10,980</b>	<b>\$108,811</b>
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	18	37	\$524.22	\$9,436	0	0			\$0	\$472	\$472	\$9,908
Smart Audit - Class 2	0	3	n/a	\$1,094	0	0			\$0	\$55	\$55	\$1,149
Smart Financing - General	0	0	n/a	\$11,802	14,625	0	\$0.04	\$0	\$0	n/a	\$0	\$11,802
Smart Financing - Compressed Air System	0	0	n/a	\$0	41,200	0	\$0.04	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>18</b>	<b>40</b>		<b>\$22,332</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$527</b>	<b>\$527</b>	<b>\$22,859</b>
<b>TOTAL COMPANY</b>	<b>1,016</b>	<b>4,952</b>		<b>\$396,819</b>		<b>2,157,937</b>		<b>\$68,246</b>	<b>\$21,821</b>	<b>\$9,880</b>	<b>\$31,701</b>	<b>\$496,766</b>

\* Lost revenue and efficiency incentives are based on prospective values.

1998

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

YEAR 3 (1st HALF)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/6 MOS	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE	TOTAL EST. COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT COSTS (3)	COSTS (4) (1)X(3)	(KWH/PARTIC) (5)	KWH/6 MOS (6) (2)X(5)	(\$/KWH) (7)	REVENUES (8) (6)X(7)	(9)	(10) (4)X(5)	(11) (9)+(10)	(12) (4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	544	1,768	\$184.44	\$100,334	662	1,205,776	\$0.03	\$37,524	\$11,304	n/a	\$11,304	\$149,162
Targeted Energy Efficiency - All Electric	122	565	\$1,132.92	\$138,216	2,784	1,572,960	\$0.03	\$48,935	\$0	\$6,911	\$6,911	\$194,062
- Non-All Electric	24	203	\$112.92	\$2,710	340	69,020	\$0.03	\$2,156	\$40	n/a	\$40	\$4,906
Compact Fluorescent Bulb	0	269	\$0.00	\$0	32	8,608	\$0.03	\$266	\$0	\$0	\$0	\$266
High - Efficiency Heat Pump - Resistance Heat	21	887	\$70.10	\$1,472	1,094	970,378	\$0.03	\$30,218	\$152	n/a	\$152	\$31,842
- Non Resistance Heat	26	848	\$70.00	\$1,820	442	374,816	\$0.03	\$11,679	\$757	n/a	\$757	\$14,256
High - Efficiency Heat Pump - Mobile Home	66	616	\$535.30	\$35,330	1,250	770,000	\$0.03	\$23,947	\$2,145	n/a	\$2,145	\$61,422
Mobile Home New Construction	0	82	n/a	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>803</b>	<b>5,238</b>		<b>\$279,882</b>		<b>4,971,558</b>		<b>\$154,725</b>	<b>\$14,398</b>	<b>\$6,911</b>	<b>\$21,309</b>	<b>\$455,916</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	204	597	\$194.13	\$39,602	0	0	n/a	\$0	\$1,980	\$1,980	\$1,980	\$41,582
- Class 2	28	60	\$1,600.00	\$44,800	0	0	n/a	\$0	\$2,240	\$2,240	\$2,240	\$47,040
Smart Financing - Existing Building	8	16	\$5,581.50	\$44,652	22,200	355,200	\$0.04	\$15,043	\$6,506	n/a	\$6,506	\$66,201
Smart Financing - New Building	1	1	\$4,564.00	\$4,564	15,300	15,300	\$0.04	\$654	\$29	\$0	\$29	\$5,247
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>241</b>	<b>674</b>		<b>\$133,618</b>		<b>370,500</b>		<b>\$15,697</b>	<b>\$6,535</b>	<b>\$4,220</b>	<b>\$10,755</b>	<b>\$160,070</b>
<b>INDUSTRIAL PROGRAMS -</b> (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	12	51	\$246.08	\$2,953	0	0	n/a	\$0	\$148	\$148	\$148	\$3,101
Smart Audit - Class 2	1	3	\$1,800.00	\$1,800	0	0	n/a	\$0	\$90	\$90	\$90	\$1,890
Smart Financing - General	0	0	\$0.00	\$1,338	29,250	0	\$0.04	\$0	\$0	\$67	\$67	\$1,405
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	82,400	0	\$0.04	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>13</b>	<b>54</b>		<b>\$6,091</b>		<b>0</b>		<b>\$0</b>	<b>\$305</b>	<b>\$305</b>	<b>\$305</b>	<b>\$6,396</b>
<b>TOTAL COMPANY</b>	<b>1,057</b>	<b>5,966</b>		<b>\$419,591</b>		<b>5,342,058</b>		<b>\$170,422</b>	<b>\$20,933</b>	<b>\$11,436</b>	<b>\$32,369</b>	<b>\$622,382</b>

\* Lost revenue and efficiency incentives are based on prospective values.

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Exhibit C  
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KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

YEAR 3 (2nd HALF)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/6 MOS	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST REVENUES	EFFICIENCY INCENTIVE (EX. C. PG. 17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11) (9)+(10)	TOTAL EST. COSTS TO BE RECOVERED (12) (4)+(8)+(11)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT (3)	COSTS (4) (1)X(3)	(KWH/PARTIC) (5)	KWH/6 MOS (6) (2)X(5)	(\$/KWH) (7)	(8) (6)X(7)	(9)	(10) (4)X(5)	(11) (9)+(10)	(12) (4)+(8)+(11)
RESIDENTIAL PROGRAMS	448	2,277	\$301.30	\$134,982	682	1,552,914	\$0.03	\$48,327	\$9,309	\$0	\$9,309	\$192,618
Energy Fitness	131	697	\$1,187.51	\$155,564	2,784	1,940,448	\$0.03	\$60,367	\$0	\$7,778	\$7,778	\$223,709
Targeted Energy Efficiency - All Electric	42	238	\$139.62	\$5,864	340	80,920	\$0.03	\$2,528	\$70	\$0	\$70	\$8,462
- Non-All Electric	0	269	\$0.00	\$0	32	8,608	\$0.03	\$266	\$0	\$0	\$0	\$266
Compact Fluorescent Bulb	108	940	\$147.45	\$15,925	1,094	1,028,360	\$0.03	\$32,023	\$780	\$0	\$780	\$48,728
High - Efficiency Heat Pump - Resistance Heat	64	894	\$72.27	\$4,625	442	395,148	\$0.03	\$12,313	\$1,863	\$0	\$1,863	\$18,801
- Non Resistance Heat	173	764	\$514.50	\$89,009	1,250	955,000	\$0.03	\$29,701	\$5,623	\$0	\$5,623	\$124,333
High - Efficiency Heat Pump - Mobile Home	33	11	\$549.45	\$18,132	0	0	n/a	0	\$0	\$907	\$907	\$19,039
Mobile Home New Construction	999	6,090		\$424,101		5,961,398		\$185,525	\$17,645	\$8,685	\$26,330	\$635,956
TOTAL RESIDENTIAL PROGRAMS	999	6,090		\$424,101		5,961,398		\$185,525	\$17,645	\$8,685	\$26,330	\$635,956
COMMERCIAL PROGRAMS	178	795	\$534.85	\$95,203	0	0	n/a	0	\$0	\$4,760	\$4,760	\$99,963
Smart Audit - Class 1	9	73	\$2,800.00	\$25,200	0	0	n/a	0	\$0	\$1,260	\$1,260	\$26,460
- Class 2	29	32	\$1,878.86	\$54,487	22,200	710,400	\$0.04	\$30,085	\$23,585	\$0	\$23,585	\$108,157
Smart Financing - Existing Building	5	6	\$1,529.20	\$7,646	15,300	91,800	\$0.04	\$3,926	\$144	\$0	\$144	\$11,716
Smart Financing - New Building	221	906		\$182,536		802,200		\$34,011	\$23,729	\$6,020	\$29,749	\$246,296
TOTAL COMMERCIAL PROGRAMS	221	906		\$182,536		802,200		\$34,011	\$23,729	\$6,020	\$29,749	\$246,296
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)	3	59	\$852.33	\$2,557	0	0	n/a	0	\$0	\$128	\$128	\$2,685
Smart Audit - Class 1	0	4	\$0.00	\$0	0	0	n/a	0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	1	0	\$0.00	\$2,430	29,250	0	\$0.04	\$0	\$383	\$0	\$383	\$2,813
Smart Financing - General	0	0	\$0.00	\$0	82,400	0	\$0.04	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	4	63		\$4,987		0		\$0	\$383	\$128	\$511	\$5,498
TOTAL INDUSTRIAL PROGRAMS	4	63		\$4,987		0		\$0	\$383	\$128	\$511	\$5,498
TOTAL COMPANY	1,224	7,059		\$611,624		6,763,598		\$219,536	\$41,757	\$14,833	\$56,590	\$887,750

\* Lost revenue and efficiency incentives are based on prospective values.

1999

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

YEAR 4 ( 1st HALF )	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/HALF	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST REVENUES	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11)	TOTAL EST. COSTS TO BE RECOVERED (12)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/HALF (6)	(\$/KWH) (7)	(8)	(9)	(10)	(9)+(10)	(4)+(8)+(11)
	(1)	(2)	(3)	(1)X(3)	(5)	(2)X(5)	(7)	(6)X(7)	(9)	(4)X(5%)	(9)+(10)	(4)+(8)+(11)
RESIDENTIAL PROGRAMS			\$312.58	\$95,650	707	1,904,658	\$0.03	\$59,273	\$10,370	\$0	\$10,370	\$165,293
Energy Fitness	306	2,694	\$1,907.41	\$143,056	630	486,990	\$0.03	\$15,150	\$0	\$7,153	\$7,153	\$165,359
Targeted Energy Efficiency - All Electric	75	773	\$112.00	\$1,344	306	76,194	\$0.03	\$2,380	\$60	\$0	\$60	\$3,784
- Non-All Electric	12	249										
Compact Fluorescent Bulb	0	269	\$0.00	\$0	31	8,339	\$0.03	\$258	\$0	\$0	\$0	\$258
High - Efficiency Heat Pump - Resistance Heat	99	1,002	\$273.74	\$27,100	1,200	1,202,400	\$0.03	\$37,443	\$4,375	\$0	\$4,375	\$68,918
- Non Resistance Heat	2	853	\$50.00	\$100	442	377,026	\$0.03	\$11,748	\$0	\$5	\$5	\$11,853
High - Efficiency Heat Pump - Mobile Home	101	826	\$545.99	\$55,145	1,475	1,218,350	\$0.03	\$37,891	\$8,505	\$0	\$8,505	\$101,541
Mobile Home New Construction ***	98	45	\$587.20	\$57,546	1,756	79,020	\$0.03	\$2,458	\$4,353	\$0	\$4,353	\$64,357
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>693</b>	<b>6,711</b>		<b>\$379,941</b>		<b>5,352,977</b>		<b>\$166,601</b>	<b>\$27,663</b>	<b>\$7,158</b>	<b>\$34,821</b>	<b>\$581,363</b>
COMMERCIAL PROGRAMS			\$204.71	\$38,076	0	0	n/a	\$0	\$0	\$1,904	\$1,904	\$39,980
Smart Audit - Class 1	186	964	\$2,705.00	\$43,280	0	0	n/a	\$0	\$0	\$2,164	\$2,164	\$45,444
- Class 2	16	87	\$5,109.67	\$30,658	13,282	677,382	\$0.04	\$28,687	\$1,395	\$0	\$1,395	\$60,740
Smart Financing - Existing Building	6	51	\$0.00	\$2,350	14,101	126,909	\$0.04	\$5,428	\$787	\$0	\$787	\$8,565
Smart Financing - New Building	3	9										
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>211</b>	<b>1,111</b>		<b>\$114,364</b>		<b>804,291</b>		<b>\$34,115</b>	<b>\$2,182</b>	<b>\$4,068</b>	<b>\$6,250</b>	<b>\$154,729</b>
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)			\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	60	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	4	\$0.00	\$0	0	0	\$0.04	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	1	\$0.00	\$0	0	0	\$0.04	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0						
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>65</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>904</b>	<b>7,920</b>		<b>\$494,305</b>		<b>6,215,216</b>		<b>\$200,716</b>	<b>\$29,845</b>	<b>\$11,226</b>	<b>\$41,071</b>	<b>\$736,092</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/96.  
 \*\*\* Participants since 09/01/98.

1999

ENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

PROGRAM DESCRIPTIONS	NEW PARTICIPANT NUMBER (1)	CUMULATIVE PARTICIPANT NUMBER ** (2)	TOTAL ESTIMATED PROGRAM COSTS PER PARTICIPANT (3)	TOTAL ACT. PROGRAM COSTS (4)	NET LOST REV/HALF (KWH/PARTIC) (5)	TOTAL ENERGY SAVINGS (KWH)/HALF (6)	NET LOST REVENUE (\$/KWH) (7)	TOTAL NET * LOST REVENUES (8)	EFFICIENCY INCENTIVE (EX. C. PG.17B) (9)	MAXIMIZING INCENTIVE (5% of COSTS) (10)	TOTAL * INCENTIVE (11)	TOTAL EST. COSTS TO BE RECOVERED (12)
	(1)	(2)	(3)	(1)X(3)	(5)	(6)	(7)	(6)X(7)	(9)	(4)X(5)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	0	2,519	\$0.00	\$972	707	1,780,933	\$0.03	\$55,423	\$0	\$0	\$0	\$56,395
Targeted Energy Efficiency - All Electric	66	700	\$1,222.76	\$80,702	630	441,000	\$0.03	\$13,720	\$0	\$4,035	\$4,035	\$98,457
- Non-All Electric	8	220	\$67.50	\$540	306	67,320	\$0.03	\$2,103	\$40	\$0	\$40	\$2,683
Compact Fluorescent Bulb	0	123	\$0.00	\$0	31	3,813	\$0.03	\$118	\$0	\$0	\$0	\$118
High - Efficiency Heat Pump - Resistance Heat	140	810	\$211.14	\$29,560	1,200	972,000	\$0.03	\$30,268	\$6,187	\$0	\$6,187	\$66,015
- Non Resistance Heat	0	593	\$0.00	\$0	447	265,071	\$0.03	\$8,260	\$0	\$0	\$0	\$8,260
High - Efficiency Heat Pump - Mobile Home	134	739	\$539.07	\$72,236	1,475	1,090,025	\$0.03	\$33,900	\$11,284	\$0	\$11,284	\$117,420
Mobile Home New Construction ***	123	196	\$581.42	\$71,515	1,755	343,980	\$0.03	\$10,698	\$5,464	\$0	\$5,464	\$87,677
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>471</b>	<b>5,900</b>		<b>\$255,525</b>		<b>4,964,142</b>		<b>\$154,490</b>	<b>\$22,975</b>	<b>\$4,035</b>	<b>\$27,010</b>	<b>\$437,025</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	188	1,129	\$356.11	\$66,948	0	0	n/a	0	\$0	\$3,347	\$3,347	\$70,295
- Class 2	21	103	\$2,705.00	\$56,805	0	0	n/a	0	\$0	\$2,840	\$2,840	\$59,645
Smart Financing - Existing Building	25	66	\$2,726.04	\$68,151	13,282	876,612	\$0.04	\$37,125	\$5,814	\$0	\$5,814	\$111,090
Smart Financing - New Building	8	13	\$3,087.00	\$24,696	14,101	183,313	\$0.04	\$7,840	\$2,099	\$0	\$2,099	\$34,635
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>242</b>	<b>1,311</b>		<b>\$216,600</b>		<b>1,059,925</b>		<b>\$44,965</b>	<b>\$7,913</b>	<b>\$6,187</b>	<b>\$14,100</b>	<b>\$275,665</b>
<b>INDUSTRIAL PROGRAMS -</b> (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	57	\$0.00	\$0	0	0	n/a	0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	4	\$0.00	\$0	0	0	n/a	0	\$0	\$0	\$0	\$0
Smart Financing - General	0	1	\$0.00	\$0	0	0	\$0.04	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.04	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>62</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>713</b>	<b>7,273</b>		<b>\$472,125</b>		<b>6,024,067</b>		<b>\$199,455</b>	<b>\$30,888</b>	<b>\$10,222</b>	<b>\$41,110</b>	<b>\$712,690</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/96.  
 \*\*\* Participants since 09/01/98.

Year 2000

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

YEAR 5 (1st half)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/HALF	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE	TOTAL EST. COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/HALF (6)	(\$/KWH) (7)	REVENUES (8)	(9)	(10)	(11)	(12)
				(1)X(3)		(2)X(5)		(6)X(7)		(4)X(5)	(9)+(10)	(4)+(6)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	0	2,161	\$0.00	\$0	707	1,527,827	\$0.03	\$47,546	\$0	\$0	\$0	\$47,546
Targeted Energy Efficiency - All Electric	66	659	\$1,272.61	\$83,992	630	415,170	\$0.03	\$12,916	\$0	\$4,200	\$4,200	\$101,108
- Non-All Electric	28	202	\$90.82	\$2,543	306	61,812	\$0.03	\$1,931	\$141	\$0	\$141	\$4,615
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0
Light - Efficiency Heat Pump - Resistance Heat	38	683	\$200.00	\$7,600	1,200	819,600	\$0.03	\$25,522	\$1,679	\$0	\$1,679	\$34,801
- Non Resistance Heat	0	348	\$0.00	\$0	447	155,556	\$0.03	\$4,847	\$0	\$0	\$0	\$4,847
Light - Efficiency Heat Pump - Mobile Home	45	683	\$500.00	\$22,500	1,475	1,007,425	\$0.03	\$31,331	\$3,789	\$0	\$3,789	\$57,620
Mobile Home New Construction ***	101	302	\$530.20	\$53,550	1,755	530,010	\$0.03	\$16,483	\$4,486	\$0	\$4,486	\$74,519
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>278</b>	<b>5,038</b>		<b>\$170,185</b>		<b>4,517,400</b>		<b>\$140,576</b>	<b>\$10,095</b>	<b>\$4,200</b>	<b>\$14,295</b>	<b>\$325,056</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	144	1,126	\$397.19	\$57,195	0	0	n/a	\$0	\$0	\$2,860	\$2,860	\$60,055
- Class 2	8	112	\$2,705.00	\$21,640	0	0	n/a	\$0	\$0	\$1,082	\$1,082	\$22,722
Smart Financing - Existing Building	16	86	\$1,307.31	\$20,917	13,282	1,142,252	\$0.04	\$48,374	\$3,721	\$0	\$3,721	\$73,012
Smart Financing - New Building	4	20	\$6,298.75	\$25,195	14,101	282,020	\$0.04	\$12,062	\$1,049	\$0	\$1,049	\$38,306
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>172</b>	<b>1,344</b>		<b>\$124,947</b>		<b>1,424,272</b>		<b>\$60,436</b>	<b>\$4,770</b>	<b>\$3,942</b>	<b>\$8,712</b>	<b>\$194,095</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>INDUSTRIAL PROGRAMS -</b> (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>TOTAL COMPANY</b>	<b>450</b>	<b>6,382</b>		<b>\$295,132</b>		<b>5,941,672</b>		<b>\$201,012</b>	<b>\$14,865</b>	<b>\$8,142</b>	<b>\$23,007</b>	<b>\$519,151</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/97  
 \*\*\* Participants since 09/01/98

Year 2000

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

PROGRAM DESCRIPTIONS	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM	NET LOST REV/HALF	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE	TOTAL EST. COSTS TO BE RECOVERED
	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/HALF (6)	(\$/KWH) (7)	REVENUES (8)	(9)	(10)	(11)	(12)
				(1)X(3)		(2)X(5)		(6)X(7)		(4)X(5)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
ESIDENTIAL PROGRAMS	0	1,525	\$0.00	\$0	706	1,076,650	\$0.03	\$33,505	\$0	\$0	\$0	\$33,505
Energy Fitness	99	583	\$1,115.41	\$110,426	630	367,290	\$0.03	\$11,426	\$0	\$5,521	\$5,521	\$127,373
Targeted Energy Efficiency - All Electric	21	170	\$94.67	\$1,988	306	52,020	\$0.03	\$1,625	\$105	\$0	\$105	\$3,718
- Non-All Electric												
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Resistance Heat	25	481	\$200.00	\$5,000	1,200	577,200	\$0.03	\$17,974	\$1,105	\$0	\$1,105	\$24,079
- Non Resistance Heat	0	147	\$0.00	\$0	446	65,562	\$0.03	\$2,043	\$0	\$0	\$0	\$2,043
High - Efficiency Heat Pump - Mobile Home	43	572	\$495.35	\$21,300	1,476	844,272	\$0.03	\$26,257	\$3,621	\$0	\$3,621	\$51,178
Mobile Home New Construction ***	94	403	\$575.00	\$54,050	1,755	707,265	\$0.03	\$21,996	\$4,175	\$0	\$4,175	\$80,221
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>282</b>	<b>3,881</b>		<b>\$192,764</b>		<b>3,690,259</b>		<b>\$114,826</b>	<b>\$9,006</b>	<b>\$5,521</b>	<b>\$14,527</b>	<b>\$322,117</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	159	1,026	\$165.24	\$26,273	0	0	n/a		\$0	\$1,314	\$1,314	\$27,587
- Class 2	29	98	\$2,705.00	\$78,445	0	0	n/a		\$0	\$3,922	\$3,922	\$82,367
Smart Financing - Existing Building	24	97	\$914.54	\$21,949	13,282	1,288,354	\$0.04	\$54,562	\$5,581	\$0	\$5,581	\$82,092
Smart Financing - New Building	0	21	\$0.00	\$7,269	14,102	296,142	\$0.04	\$12,666	\$0	\$0	\$0	\$19,935
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>212</b>	<b>1,242</b>		<b>\$133,936</b>		<b>1,584,496</b>		<b>\$67,228</b>	<b>\$5,581</b>	<b>\$5,236</b>	<b>\$10,817</b>	<b>\$211,981</b>
<b>INDUSTRIAL PROGRAMS -</b>												
(w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a		\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a		\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>0</b>
<b>TOTAL COMPANY</b>	<b>494</b>	<b>5,123</b>		<b>\$326,700</b>		<b>5,274,755</b>		<b>\$182,054</b>	<b>\$14,587</b>	<b>\$10,757</b>	<b>\$25,344</b>	<b>\$534,098</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/97  
 \*\*\* Participants since 09/01/98.

Year 2001

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KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

YEAR 6 (1st Half)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM COSTS	NET LOST REV/QTR	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C, PG. 17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11)	TOTAL EST. COSTS TO BE RECOVERED (12)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/HALF (6)	(\$/KWH) (7)	REVENUES (8)	(9)	(10)	(9)+(10)	(4)+(8)+(11)
			(1)X(3)	(1)X(3)	(5)	(2)X(6)	(7)	(6)X(7)		(4)X(5%)		(12)
RESIDENTIAL PROGRAMS	0	1,044	\$0.00	\$0	707	738,108	\$0.03112	\$22,970	\$0	\$0	\$0	\$22,970
Energy Fitness	62	535	\$1,276.94	\$79,170	630	337,050	\$0.03111	\$10,486	\$0	\$3,959	\$3,959	\$93,615
Targeted Energy Efficiency - All Electric	18	137	\$87.89	\$1,582	306	41,922	\$0.03124	\$1,310	\$90	\$0	\$90	\$2,982
- Non-All Electric												
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Resistance Heat	23	438	\$201.04	\$4,624	1200	525,600	\$0.03114	\$16,367	\$1,016	\$0	\$1,016	\$22,007
- Non Resistance Heat	0	81	\$0.00	\$0	447	36,207	\$0.03116	\$1,128	\$0	\$0	\$0	\$1,128
High - Efficiency Heat Pump - Mobile Home	53	558	\$472.15	\$25,024	1475	823,050	\$0.03110	\$25,597	\$4,463	\$0	\$4,463	\$55,084
Mobile Home New Construction ***	83	488	\$537.04	\$44,574	1755	856,440	\$0.03110	\$26,635	\$3,687	\$0	\$3,687	\$74,896
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>239</b>	<b>3,281</b>		<b>\$154,974</b>		<b>3,358,377</b>		<b>\$104,493</b>	<b>\$9,256</b>	<b>\$3,959</b>	<b>\$13,215</b>	<b>\$272,682</b>
COMMERCIAL PROGRAMS					0	0	n/a	\$0	\$0	\$2,156	\$2,156	\$45,280
Smart Audit - Class 1	134	1,017	\$321.82	\$43,124	0	0	n/a	\$0	\$0	\$2,114	\$2,114	\$44,394
- Class 2	28	105	\$1,510.00	\$42,280	0	0	n/a	\$0	\$0	\$0	\$0	\$101,122
Smart Financing - Existing Building	15	112	\$2,309.00	\$34,635	13,282	1,487,584	\$0.04235	\$62,999	\$3,488	\$0	\$3,488	\$49,305
Smart Financing - New Building	8	25	\$4,016.13	\$32,129	14,101	352,525	\$0.04277	\$15,077	\$2,099	\$0	\$2,099	\$240,101
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>185</b>	<b>1,259</b>		<b>\$152,168</b>		<b>1,840,109</b>		<b>\$78,076</b>	<b>\$5,587</b>	<b>\$4,270</b>	<b>\$9,857</b>	<b>\$240,101</b>
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)					0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>424</b>	<b>4,540</b>		<b>\$307,142</b>		<b>5,198,486</b>		<b>\$182,569</b>	<b>\$14,843</b>	<b>\$8,229</b>	<b>\$23,072</b>	<b>\$512,783</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/98.  
 \*\*\* Participants since 01/01/98.



Year 2001

Exhibit C  
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KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM

YEAR 6 (2nd Half)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACT. PROGRAM	NET LOST REVIQTR	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE	TOTAL * INCENTIVE	TOTAL EST. COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	COSTS (4)	(KWH/PARTIC) (5)	KWH/HALF (6)	(\$/KWH) (7)	REVENUES (8)	(9)	(5% of COSTS) (10)	(11)	(12)
			(1)X(3)	(4)	(5)	(2)X(5)	(7)	(6)X(7)	(9)	(4)X( 5%)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	0	535	\$0.00	\$0	706	377,710	\$0.03112	\$11,754	\$0	\$0	\$0	\$11,754
Targeted Energy Efficiency - All Electric	88	486	\$1,018.86	\$89,660	630	306,180	\$0.03111	\$9,525	\$0	\$4,483	\$4,483	\$103,668
- Non-All Electric	46	122	\$81.46	\$3,747	306	37,332	\$0.03124	\$1,166	\$231	\$0	\$231	\$5,144
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Resistance Heat	30	412	\$173.33	\$5,200	1,200	494,400	\$0.03114	\$15,396	\$1,326	\$0	\$1,326	\$21,922
- Non Resistance Heat	0	35	\$0.00	\$0	446	16,610	\$0.03116	\$486	\$0	\$0	\$0	\$486
High - Efficiency Heat Pump - Mobile Home	47	469	\$510.64	\$24,000	1,476	692,244	\$0.03110	\$21,529	\$3,958	\$0	\$3,958	\$49,487
Mobile Home New Construction ***	92	568	\$555.43	\$51,100	1,755	995,840	\$0.03110	\$31,002	\$4,087	\$0	\$4,087	\$86,189
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>303</b>	<b>2,627</b>		<b>\$173,707</b>		<b>2,920,316</b>		<b>\$90,858</b>	<b>\$9,602</b>	<b>\$4,483</b>	<b>\$14,085</b>	<b>\$278,650</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	131	966	\$454.04	\$59,479	0	0	n/a	\$0	\$0	\$2,974	\$2,974	\$62,453
- Class 2	5	111	\$9,817.20	\$49,086	0	0	n/a	\$0	\$0	\$2,454	\$2,454	\$51,540
Smart Financing - Existing Building	15	109	\$1,664.27	\$24,964	13,282	1,447,738	\$0.04235	\$61,312	\$3,488	\$0	\$3,488	\$89,764
Smart Financing - New Building	18	34	\$1,799.28	\$32,387	14,102	479,468	\$0.04277	\$20,507	\$4,722	\$0	\$4,722	\$57,616
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>169</b>	<b>1,220</b>		<b>\$165,916</b>		<b>1,927,206</b>		<b>\$81,819</b>	<b>\$8,210</b>	<b>\$5,428</b>	<b>\$13,638</b>	<b>\$261,373</b>
<b>INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)</b>												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>472</b>	<b>3,847</b>		<b>\$339,623</b>		<b>4,847,522</b>		<b>\$172,677</b>	<b>\$17,812</b>	<b>\$9,911</b>	<b>\$27,723</b>	<b>\$540,023</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/98  
 \*\*\* Participants since 07/01/98.

Year 2002

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES  
FOR 3 YEAR PROGRAM

YEAR 7 ( 1st Half )	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS PER PARTICIPANT	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/HALF	TOTAL ENERGY SAVINGS KWH/HALF	NET LOST REVENUE (\$/KWH)	TOTAL NET * LOST REVENUES	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE	TOTAL ACTUAL COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				(1)X(3)	(KWH/PARTIC)	(2)X(5)		(6)X(7)		(4)X( 5%)	(9)+(10)	(4)+(8)+(11)
RESIDENTIAL PROGRAMS												
Energy Fitness	0	116	\$0.00	\$0	707	82,012	\$0.03112	\$2,552	\$0	\$0	\$0	\$2,552
Targeted Energy Efficiency - All Electric	63	442	\$1,752.40	\$110,401	1,028	454,376	\$0.03111	\$14,136	\$0	\$5,520	\$5,520	\$130,057
- Non-All Electric	32	135	\$65.47	\$2,095	315	42,525	\$0.03124	\$1,328	\$137	\$0	\$137	\$3,560
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Resistance Heat	1	314	\$1,152.00	\$1,152	1,200	376,800	\$0.03114	\$11,734	\$44	\$0	\$44	\$12,930
- Non Resistance Heat	0	0	\$0.00	\$0	447	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Mobile Home	43	414	\$619.77	\$26,650	1,144	473,616	\$0.03110	\$14,729	\$1,244	\$0	\$1,244	\$42,623
Mobile Home New Construction ***	57	568	\$641.77	\$36,581	1,809	1,027,512	\$0.03110	\$31,956	\$231	\$0	\$231	\$68,768
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>196</b>	<b>1,989</b>		<b>\$176,879</b>		<b>2,456,841</b>		<b>\$76,435</b>	<b>\$1,656</b>	<b>\$5,520</b>	<b>\$7,176</b>	<b>\$260,490</b>
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	125	923	\$432.92	\$54,115	0	0	n/a	\$0	\$0	\$2,706	\$2,706	\$56,821
- Class 2	8	104	\$3,711.00	\$29,688	0	0	n/a	\$0	\$0	\$1,484	\$1,484	\$31,172
Smart Financing - Existing Building	7	101	\$2,552.71	\$17,869	13,282	1,341,482	\$0.04235	\$56,812	\$1,628	\$0	\$1,628	\$76,309
Smart Financing - New Building	5	42	\$1,394.60	\$6,973	14,101	592,242	\$0.04277	\$25,330	\$1,312	\$0	\$1,312	\$33,615
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>145</b>	<b>1,170</b>		<b>\$108,645</b>		<b>1,933,724</b>		<b>\$82,142</b>	<b>\$2,940</b>	<b>\$4,190</b>	<b>\$7,130</b>	<b>\$197,917</b>
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>341</b>	<b>3,159</b>		<b>\$285,524</b>		<b>4,390,565</b>		<b>\$158,577</b>	<b>\$4,596</b>	<b>\$9,710</b>	<b>\$14,306</b>	<b>\$458,407</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/1999.  
 \*\*\* Participants since 01/01/1999.

Year 2002

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES  
FOR 3 YEAR PROGRAM

YEAR 7 (2nd Half)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS PER PARTICIPANT	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/QTR	TOTAL ENERGY SAVINGS KWH/HALF	NET LOST REVENUE (\$/KWH)	TOTAL NET * REVENUES	EFFICIENCY (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE	TOTAL ACTUAL COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			(1)X(3)			(2)X(5)		(6)X(7)		(4)X(5%)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	0	0	\$0.00	\$0	706	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency - All Electric	76	457	\$1,039.33	\$78,989	1,028	469,796	\$0.03111	\$14,615	\$0	\$3,949	\$3,949	\$97,553
Targeted Energy Efficiency - Non-All Electric	13	156	\$85.92	\$1,117	315	49,140	\$0.03124	\$1,535	\$56	\$0	\$56	\$2,708
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Resistance Heat	0	177	\$0.00	(\$352)	1,200	212,400	\$0.03114	\$6,614	\$0	\$0	\$0	\$6,262
High - Efficiency Heat Pump - Non Resistance Heat	0	0	\$0.00	\$0	446	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump - Mobile Home	43	308	\$603.84	\$25,965	1,144	352,352	\$0.03110	\$10,958	\$1,244	\$0	\$1,244	\$38,167
Mobile Home New Construction ***	61	519	\$644.46	\$39,312	1,809	938,871	\$0.03110	\$29,199	\$248	\$0	\$248	\$68,759
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>193</b>	<b>1,617</b>		<b>\$145,031</b>		<b>2,022,559</b>		<b>\$62,921</b>	<b>\$1,548</b>	<b>\$3,949</b>	<b>\$5,497</b>	<b>\$213,449</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	0	786	\$0.00	\$74,422	0	0	n/a	\$0	\$0	\$3,721	\$3,721	\$78,143
Smart Audit - Class 2	0	90	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	25	97	\$909.76	\$22,744	13,282	1,288,354	\$0.04235	\$54,562	\$5,814	\$0	\$5,814	\$83,120
Smart Financing - New Building	16	44	\$2,424.94	\$38,799	14,102	620,488	\$0.04277	\$26,538	\$4,197	\$0	\$4,197	\$69,534
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>41</b>	<b>1,017</b>		<b>\$135,965</b>		<b>1,908,842</b>		<b>\$81,100</b>	<b>\$10,011</b>	<b>\$3,721</b>	<b>\$13,732</b>	<b>\$230,797</b>
<b>INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)</b>												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>234</b>	<b>2,634</b>		<b>\$280,996</b>		<b>3,931,401</b>		<b>\$144,021</b>	<b>\$11,559</b>	<b>\$7,670</b>	<b>\$19,229</b>	<b>\$444,246</b>

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/1999.  
 \*\*\* Participants since 07/01/1999.

Year 2003												Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM												PAGE 9A of 18
YEAR 8 (1st HALF)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/HALF	TOTAL ENERGY SAVINGS KWH/HALF	NET LOST REVENUE (\$/KWH)	TOTAL NET * LOST	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11)	TOTAL ACTUAL COSTS TO BE RECOVERED (12)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	(4) (1)X(3)	(5) (KWH/ PARTICIPANT)	(6) (2)X(5)	(7)	(8) (6)X(7)	(9)	(10) (4)X( 5%)	(9)+(10)	(4)+(8)+(11)
RESIDENTIAL PROGRAMS												
Energy Fitness	0	0	\$0.00	\$0	707	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency												
- All Electric	100	467	\$849.84	\$84,984	1,028	480,076	\$0.03111	\$14,935	\$0	\$4,249	\$4,249	\$104,168
- Non-All Electric	7	151	\$79.29	\$555	314	47,414	\$0.03124	\$1,481	\$30	\$0	\$30	\$2,066
Compact Fluorescent Bulb	0	0	\$0.00		0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	94	\$0.00	\$0	1,200	112,800	\$0.03114	\$3,513	\$0	\$0	\$0	\$3,513
- Non Resistance Heat	0	0	\$0.00	\$0	447	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Mobile Home	34	268	\$379.41	\$12,900	1,144	306,592	\$0.03110	\$9,535	\$983	\$0	\$983	\$23,418
Mobile Home New Construction ***												
- Heat Pump	46	460	\$482.61	\$22,200	1,808	831,680	\$0.03110	\$25,865	\$187	\$0	\$187	\$48,252
- Air Conditioner	0	0	\$0.00	\$0	157	0	\$0.03124	\$0	\$0	\$0	\$0	\$0
Modified Energy Fitness	101	23	\$142.72	\$14,415	1,194	27,462	\$0.03116	\$856	\$2,127	\$0	\$2,127	\$17,398
TOTAL RESIDENTIAL PROGRAMS	288	1,463		\$135,054		1,806,024		\$56,185	\$3,327	\$4,249	\$7,576	\$198,815
	=====	=====		=====		=====		=====	=====	=====	=====	=====
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	0	620	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	73	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	110	\$0.00	\$0	13,282	1,461,020	\$0.04235	\$61,874	\$0	\$0	\$0	\$61,874
Smart Financing - New Building	0	49	\$0.00	\$0	14,101	690,949	\$0.04277	\$29,552	\$0	\$0	\$0	\$29,552
TOTAL COMMERCIAL PROGRAMS	0	852		\$0		2,151,969		\$91,426	\$0	\$0	\$0	\$91,426
	=====	=====		=====		=====		=====	=====	=====	=====	=====
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
	=====	=====		=====		=====		=====	=====	=====	=====	=====
TOTAL COMPANY	288	2,315		\$135,054		3,957,993		\$147,611	\$3,327	\$4,249	\$7,576	\$290,241
	=====	=====		=====		=====		=====	=====	=====	=====	=====

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2000.

\*\*\* Participants since 01/01/2000.

Year 2003												Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM												PAGE 9B of
												18
YEAR 8 (2nd HALF)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/HALF	TOTAL ENERGY SAVINGS KWH/HALF	NET LOST REVENUE (\$/KWH)	TOTAL NET * LOST REVENUES (6)X(7)	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS) (4)X(5%)	TOTAL * INCENTIVE (11) (9)+(10)	TOTAL ACTUAL COSTS TO BE RECOVERED (12) (4)+(8)+(11)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	(4) (1)X(3)	(KWH/ PARTICIPANT) (5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
RESIDENTIAL PROGRAMS			\$0.00	\$0	706	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Energy Fitness	0	0										
Targeted Energy Efficiency	69	473	\$974.94	\$67,271	1,028	486,244	\$0.03111	\$15,127	\$0	\$3,364	\$3,364	\$85,762
- All Electric	69	167	\$76.10	\$5,251	316	52,772	\$0.03124	\$1,649	\$295	\$0	\$295	\$7,195
- Non-All Electric												
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump	0	63	\$0.00	\$0	1,200	75,600	\$0.03114	\$2,354	\$0	\$0	\$0	\$2,354
- Resistance Heat	0	0	\$0.00	\$0	446	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat												
High - Efficiency Heat Pump	29	256	\$453.45	\$13,150	1,144	292,864	\$0.03110	\$9,108	\$839	\$0	\$839	\$23,097
- Mobile Home												
Mobile Home New Construction ***	64	419	\$649.59	\$41,574	1,810	758,390	\$0.03110	\$23,586	\$260	\$0	\$260	\$65,420
- Heat Pump	1	0	\$150.00	\$150	158	0	\$0.03124	\$0	\$0	\$0	\$0	\$150
- Air Conditioner												
Modified Energy Fitness	441	324	\$431.43	\$190,262	1,194	386,856	\$0.03116	\$12,054	\$9,287	\$0	\$9,287	\$211,603
TOTAL RESIDENTIAL PROGRAMS	673	1,702		\$317,658		2,052,726		\$63,878	\$10,681	\$3,364	\$14,045	\$395,581
COMMERCIAL PROGRAMS			\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	453	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	63	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	77	\$0.00	\$0	13,282	1,022,714	\$0.04235	\$43,312	\$0	\$0	\$0	\$43,312
Smart Financing - New Building	0	47	\$0.00	\$0	14,102	662,794	\$0.04277	\$28,348	\$0	\$0	\$0	\$28,348
TOTAL COMMERCIAL PROGRAMS	0	640		\$0		1,685,508		\$71,660	\$0	\$0	\$0	\$71,660
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)			\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0		\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
TOTAL COMPANY	673	2,342		\$317,658		3,738,234		\$135,538	\$10,681	\$3,364	\$14,045	\$467,241

\* Lost revenue and efficiency incentives are based on prospective values.  
\*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/2000.  
\*\*\* Participants since 07/01/2000.

Year 2004												
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM											Exhibit C	
											PAGE 10A of 18	
YEAR 9 (1st HALF)	NEW	CUMULATIVE	TOTAL ESTIMATED	TOTAL ACTUAL	NET LOST	TOTAL ENERGY SAVINGS	NET LOST	TOTAL NET *	EFFICIENCY	MAXIMIZING		TOTAL ACTUAL
	PARTICIPANT	PARTICIPANT	PROGRAM COSTS	PROGRAM	REV/QTR	KWH/ HALF	REVENUE	LOST	INCENTIVE	INCENTIVE	TOTAL *	COSTS TO BE
PROGRAM DESCRIPTIONS	NUMBER	NUMBER **	PER PARTICIPANT	COSTS	(KWH/PARTIC)	KWH/ HALF	(\$/KWH)	REVENUES	(EX. C. PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				(1)X(3)		(2)X(5)		(6)X(7)		(4)X( 5%)	(9)+(10)	(4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	0	0	\$0.00	\$0	707	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency												
- All Electric	72	463	\$751.54	\$54,111	1,028	475,964	\$0.03111	\$14,807	\$0	\$2,706	\$2,706	\$71,624
- Non-All Electric	10	179	\$78.60	\$786	314	56,206	\$0.03124	\$1,756	\$43	\$0	\$43	\$2,585
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	42	\$0.00	\$0	1,200	50,400	\$0.03114	\$1,569	\$0	\$0	\$0	\$1,569
- Non Resistance Heat	0	0	\$0.00	\$0	447	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Mobile Home	41	247	\$428.05	\$17,550	1,144	282,568	\$0.03110	\$8,788	\$1,186	\$0	\$1,186	\$27,524
Mobile Home New Construction ***												
- Heat Pump	68	394	\$503.68	\$34,250	1,808	712,352	\$0.03110	\$22,154	\$276	\$0	\$276	\$56,680
- Air Conditioner	1	1	\$150.00	\$150	157	157	\$0.03124	\$5	\$0	\$0	\$0	\$155
Modified Energy Fitness	334	735	\$417.76	\$139,531	1,194	877,590	\$0.03116	\$27,346	\$7,034	\$0	\$7,034	\$173,911
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>526</b>	<b>2,061</b>		<b>\$246,378</b>				<b>\$76,425</b>	<b>\$8,539</b>	<b>\$2,706</b>	<b>\$11,245</b>	<b>\$334,048</b>
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	0	338	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	30	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	54	\$0.00	\$0	13,282	717,228	\$0.04235	\$30,375	\$0	\$0	\$0	\$30,375
Smart Financing - New Building	0	43	\$0.00	\$0	14,101	606,343	\$0.04277	\$25,933	\$0	\$0	\$0	\$25,933
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>0</b>	<b>465</b>		<b>\$0</b>				<b>\$56,308</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$56,308</b>
<b>INDUSTRIAL PROGRAMS -</b>												
<b>(w/Est. Opt-Outs Removed)</b>												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL COMPANY</b>	<b>526</b>	<b>2,526</b>		<b>\$246,378</b>				<b>\$132,733</b>	<b>\$8,539</b>	<b>\$2,706</b>	<b>\$11,245</b>	<b>\$390,356</b>

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2001.

\*\*\* Participants since 01/01/2001.

Year 2004

Exhibit C

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KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3  
YEAR PROGRAM

YEAR 9 (2nd HALF)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/QTR	TOTAL ENERGY SAVINGS KWH/HALF	NET LOST REVENUE (\$/KWH)	TOTAL NET * LOST REVENUES	EFFICIENCY INCENTIVE (EX. C. PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE	TOTAL ACTUAL COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	(1)	(2)	(3)	(1)X(3)	(5)	(2)X(5)	(7)	(6)X(7)	(9)	(4)X(5%)	(9)+(10)	(4)+(8)+(11)
RESIDENTIAL PROGRAMS												
Energy Fitness	0	0	\$0.00	\$0	706	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency	89	462	\$1,118.43	\$99,540	1,028	474,936	\$0.03111	\$14,775	\$0	\$4,977	\$4,977	\$119,292
- All Electric	72	205	\$60.60	\$4,363	316	64,780	\$0.03124	\$2,024	\$308	\$0	\$308	\$6,695
- Non-All Electric												
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump	0	15	\$0.00	\$0	1,200	18,000	\$0.03114	\$561	\$0	\$0	\$0	\$561
- Resistance Heat	0	0	\$0.00	\$0	446	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat												
High - Efficiency Heat Pump - Mobile Home	46	239	\$469.57	\$21,600	1,144	273,416	\$0.03110	\$8,503	\$1,330	\$0	\$1,330	\$31,433
Mobile Home New Construction ***												
- Heat Pump	70	379	\$597.14	\$41,800	1,810	685,990	\$0.03110	\$21,334	\$284	\$0	\$284	\$63,418
- Air Conditioner	0	2	#DIV/0!	\$0	158	316	\$0.03124	\$10	\$0	\$0	\$0	\$10
Modified Energy Fitness	391	1,070	\$347.20	\$135,756	1,194	1,277,580	\$0.03116	\$39,809	\$8,234	\$0	\$8,234	\$183,799
TOTAL RESIDENTIAL PROGRAMS	668	2,372		\$303,059		2,795,018		\$87,016	\$10,156	\$4,977	\$15,133	\$405,208
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	0	191	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	10	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	41	\$0.00	\$0	13,282	544,562	\$0.04235	\$23,062	\$0	\$0	\$0	\$23,062
Smart Financing - New Building	0	30	\$0.00	\$0	14,102	423,060	\$0.04277	\$18,094	\$0	\$0	\$0	\$18,094
TOTAL COMMERCIAL PROGRAMS	0	272		\$0		967,622		\$41,156				\$41,156
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
TOTAL COMPANY	668	2,644		\$303,059		3,762,640		\$128,172	\$10,156	\$4,977	\$15,133	\$446,364

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/2001.  
 \*\*\* Participants since 07/01/2001.





Year 2005												
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM											Exhibit C PAGE 11B of	18
YEAR 10 (2nd HALF)	NEW	CUMULATIVE	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACTUAL PROGRAM	NET LOST REV/QTRS	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET *	EFFICIENCY	MAXIMIZING	TOTAL *	TOTAL ACTUAL COSTS TO BE
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT (3)	COSTS (4) (1)X(3)	(KWH/ PARTICIPANT) (5)	KWH/ HALF (6) (2)X(5)	(\$/KWH) (7)	REVENUES (8) (6)X(7)	(EX. C, PG.17B) (9)	(5% of COSTS) (10) (4)X( 5%)	INCENTIVE (11) (9)+(10)	RECOVERED (12) (4)+(8)+(11)
<b>RESIDENTIAL PROGRAMS</b>												
Energy Fitness	0	0	\$0.00	\$0	706	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency												
- All Electric	85	492	\$1,207.52	\$102,639	896	440,832	\$0.03111	\$13,714	\$0	\$5,132	\$5,132	\$121,485
- Non-All Electric	26	233	\$65.85	\$1,712	266	61,978	\$0.03124	\$1,936	\$513	\$0	\$513	\$4,161
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	0	\$0.00	\$0	1,200	0	\$0.03114	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat	0	0	\$0.00	\$0	446	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Mobile Home	40	225	\$476.78	\$19,071	1,144	257,400	\$0.03110	\$8,005	\$3,168	\$0	\$3,168	\$30,244
Mobile Home New Construction ***												
- Heat Pump	83	385	\$544.23	\$45,171	1,810	696,850	\$0.03110	\$21,672	\$10,372	\$0	\$10,372	\$77,215
- Air Conditioner	0	2	\$0.00	\$0	158	316	\$0.03124	\$10	\$0	\$0	\$0	\$10
Modified Energy Fitness	351	1,826	\$373.12	\$130,965	612	1,117,512	\$0.03116	\$34,822	\$14,770	\$0	\$14,770	\$180,557
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>585</b>	<b>3,163</b>		<b>\$299,558</b>		<b>2,574,888</b>		<b>\$80,159</b>	<b>\$28,823</b>	<b>\$5,132</b>	<b>\$33,955</b>	<b>\$413,672</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>COMMERCIAL PROGRAMS</b>												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	20	\$0.00	\$0	13,282	265,640	\$0.04235	\$11,250	\$0	\$0	\$0	\$11,250
Smart Financing - New Building	0	11	\$0.00	\$0	14,102	155,122	\$0.04277	\$6,635	\$0	\$0	\$0	\$6,635
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>0</b>	<b>31</b>		<b>\$0</b>		<b>420,762</b>		<b>\$17,885</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,885</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>INDUSTRIAL PROGRAMS -</b> (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
<b>TOTAL COMPANY</b>	<b>585</b>	<b>3,194</b>		<b>\$299,558</b>		<b>2,995,650</b>		<b>\$98,044</b>	<b>\$28,823</b>	<b>\$5,132</b>	<b>\$33,955</b>	<b>\$431,557</b>
	=====	=====		=====		=====		=====	=====	=====	=====	=====
* Lost revenue and efficiency incentives are based on prospective values.												
** Cumulative participants include a reduction for the cumulative participants as of 12/31/2002.												
*** Participants since 07/01/2002.												

Year 2006													Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM													PAGE 12A of
YEAR 11 (1st HALF)													18
PROGRAM DESCRIPTIONS	NEW	CUMULATIVE	TOTAL ESTIMATED	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING		TOTAL	
	PARTICIPANT	PARTICIPANT	PROGRAM	ACTUAL	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	ACTUAL	
	NUMBER	NUMBER **	PER	COSTS	(KWH/ PARTICIPANT)	KWH/ HALF	(\$/KWH)	REVENUES	(EX. C, PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
				(1)X(3)		(2)X(5)		(6)X(7)		(4)X(5%)	(9)+(10)	(4)+(8)+(11)	
RESIDENTIAL PROGRAMS	0	0	\$0.00	\$0	707	0	\$0.03112	\$0	\$0	\$0	\$0	\$0	
Energy Fitness													
Targeted Energy Efficiency													
- All Electric	75	496	\$974.31	\$73,073	896	444,416	\$0.03111	\$13,826	\$0	\$3,654	\$3,654	\$90,553	
- Non-All Electric	34	249	\$84.56	\$2,875	267	66,483	\$0.03124	\$2,077	\$671	\$0	\$671	\$5,623	
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Resistance Heat	0	0	\$0.00	\$0	1,200	0	\$0.03114	\$0	\$0	\$0	\$0	\$0	
- Non Resistance Heat	0	0	\$0.00	\$0	447	0	\$0.03116	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Mobile Home	48	230	\$446.06	\$21,411	1,145	263,350	\$0.03110	\$8,190	\$3,802	\$0	\$3,802	\$33,403	
Mobile Home New Construction ***													
- Heat Pump	90	425	\$561.21	\$50,509	1,810	769,250	\$0.03110	\$23,924	\$11,246	\$0	\$11,246	\$85,679	
- Air Conditioner	0	2	\$0.00	\$0	157	314	\$0.03124	\$10	\$0	\$0	\$0	\$10	
Modified Energy Fitness	440	2,185	\$275.33	\$121,144	613	1,339,405	\$0.03116	\$41,736	\$18,515	\$0	\$18,515	\$181,395	
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>687</b>	<b>3,587</b>		<b>\$269,012</b>		<b>2,883,218</b>		<b>\$89,763</b>	<b>\$34,234</b>	<b>\$3,654</b>	<b>\$37,888</b>	<b>\$396,663</b>	
COMMERCIAL PROGRAMS	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
- Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>TOTAL COMPANY</b>	<b>687</b>	<b>3,587</b>		<b>\$269,012</b>		<b>2,883,218</b>		<b>\$89,763</b>	<b>\$34,234</b>	<b>\$3,654</b>	<b>\$37,888</b>	<b>\$396,663</b>	

\* Lost revenue and efficiency incentives are based on prospective values.  
\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2003.  
\*\*\* Participants since 01/01/2003.

Year 2006												
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM											Exhibit C PAGE 12B of	18
YEAR 11 (2nd HALF)	NEW	CUMULATIVE	TOTAL ESTIMATED	TOTAL ACTUAL	NET LOST	TOTAL ENERGY SAVINGS	NET LOST	TOTAL NET *	EFFICIENCY	MAXIMIZING		TOTAL ACTUAL
	PARTICIPANT	PARTICIPANT	PROGRAM COSTS	PROGRAM	REVIQTRS	KWH/ HALF	REVENUE	LOST	INCENTIVE	INCENTIVE	TOTAL *	COSTS TO BE
PROGRAM DESCRIPTIONS	NUMBER	NUMBER **	PER PARTICIPANT	COSTS	(KWH/ PARTICIPANT)	KWH/ HALF	(\$/KWH)	REVENUES	(EX. C, PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
RESIDENTIAL PROGRAMS				(1)X(3)		(2)X(5)		(6)X(7)		(4)X( 5%)	(9)+(10)	(4)+(8)+(11)
Energy Fitness	0	0	\$0.00	\$0	706	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency												
- All Electric	87	481	\$1,147.46	\$99,829	896	430,976	\$0.03111	\$13,408	\$0	\$4,991	\$4,991	\$118,228
- Non-All Electric	46	254	\$84.00	\$3,864	266	67,564	\$0.03124	\$2,111	\$908	\$0	\$908	\$6,883
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	0	\$0.00	\$0	1,200	0	\$0.03114	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat	0	0	\$0.00	\$0	446	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Mobile Home	45	245	\$460.00	\$20,700	1,144	280,280	\$0.03110	\$8,717	\$3,564	\$0	\$3,564	\$32,981
Mobile Home New Construction ***												
- Heat Pump	94	460	\$544.15	\$51,150	1,808	831,680	\$0.03110	\$25,865	\$11,746	\$0	\$11,746	\$88,761
- Air Conditioner	0	2	\$0.00	\$0	158	316	\$0.03124	\$10	\$0	\$0	\$0	\$10
Modified Energy Fitness	560	2,391	\$427.85	\$239,596	612	1,463,292	\$0.03116	\$45,596	\$23,565	\$0	\$23,565	\$308,757
TOTAL RESIDENTIAL PROGRAMS	832	3,833		\$415,139		3,074,108		\$95,707	\$39,783	\$4,991	\$44,774	\$555,620
	=====	=====		=====		=====		=====	=====	=====	=====	=====
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL COMMERCIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
	=====	=====		=====		=====		=====	=====	=====	=====	=====
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
	=====	=====		=====		=====		=====	=====	=====	=====	=====
TOTAL COMPANY	832	3,833		\$415,139		3,074,108		\$95,707	\$39,783	\$4,991	\$44,774	\$555,620
	=====	=====		=====		=====		=====	=====	=====	=====	=====

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 12/31/2003.

\*\*\* Participants since 07/01/2003.

Year 2007												
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM											Exhibit C PAGE 13A of	18
YEAR 12 (1st HALF)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/QTRS	TOTAL ENERGY SAVINGS (KWH/ HALF)	NET LOST REVENUE (\$/KWH)	TOTAL NET * REVENUES	EFFICIENCY INCENTIVE	MAXIMIZING INCENTIVE	TOTAL * INCENTIVE	TOTAL ACTUAL COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			(1)X(3)			(2)X(5)		(6)X(7)		(4)X(5%)	(9)+(10)	(4)+(8)+(11)
RESIDENTIAL PROGRAMS	0	0	\$0.00	\$0	707	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Energy Fitness												
Targeted Energy Efficiency												
- All Electric	128	295	\$1,022.27	\$130,851	896	264,320	\$0.04346	\$11,487	\$0	\$6,543	\$6,543	\$148,881
- Non-All Electric	29	115	\$86.48	\$2,508	277	31,855	\$0.04362	\$1,390	\$572	\$0	\$572	\$4,470
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	0	\$0.00	\$0	1,200	0	\$0.03114	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat	0	0	\$0.00	\$0	447	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Mobile Home	50	153	\$450.00	\$22,500	1,145	175,185	\$0.04346	\$7,614	\$3,960	\$0	\$3,960	\$34,074
Mobile Home New Construction ***												
- Heat Pump	84	304	\$563.10	\$47,300	1,810	550,240	\$0.04348	\$23,924	\$10,497	\$0	\$10,497	\$81,721
- Air Conditioner	0	0	\$0.00	\$0	157	0	\$0.04343	\$0	\$0	\$0	\$0	\$0
Modified Energy Fitness	515	1,605	\$381.00	\$196,214	613	983,865	\$0.04349	\$42,788	\$21,671	\$0	\$21,671	\$260,673
Case No 2006 - 00373, Dated December 14, 2006:												
- HEAP - Kentucky Power Company's Information Technology Implementation Costs				\$58,968								\$58,968
- HEAP - KACA's Information Technology Implementation Costs				\$15,700								\$15,700
TOTAL RESIDENTIAL PROGRAMS	806	2,472		\$474,041		2,005,465		\$87,203	\$36,700	\$6,543	\$43,243	\$604,487
COMMERCIAL PROGRAMS	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL COMMERCIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
TOTAL COMPANY	806	2,472		\$474,041		2,005,465		\$87,203	\$36,700	\$6,543	\$43,243	\$604,487

\* Lost revenue and efficiency incentives are based on prospective values.  
\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2005.  
\*\*\* Participants since 07/01/2005.

Year 2007												Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM												PAGE 13B of
												18
YEAR 12 (2nd Half)	NEW	CUMULATIVE	TOTAL ESTIMATED PROGRAM COSTS	TOTAL ACTUAL PROGRAM COSTS	NET LOST REV/QTRS	TOTAL ENERGY SAVINGS (KWH/ HALF)	NET LOST REVENUE (\$/KWH)	TOTAL NET * REVENUES	EFFICIENCY INCENTIVE (EX. C, PG.17B)	MAXIMIZING INCENTIVE (5% of COSTS)	TOTAL * INCENTIVE (11)	TOTAL ACTUAL COSTS TO BE (12)
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER ** (2)	PER PARTICIPANT COSTS (3)	(4)	(KWH/ PARTICIPANT) (5)	(6)	(7)	(8)	(9)	(10)	(9)+(10)	(12)
				(1)X(3)	(2)X(5)			(6)X(7)		(4)X(5%)		(4)+(8)+(11)
RESIDENTIAL PROGRAMS			\$0.00	\$0	706	0	\$0.03112	\$0	\$0	\$0	\$0	\$0
Energy Fitness	0	0										
Targeted Energy Efficiency			\$879.82	\$87,982	896	377,216	\$0.04346	\$16,394	\$0	\$4,399	\$4,399	\$108,775
- All Electric	100	421			276	41,676	\$0.04362	\$1,818	\$987	\$0	\$987	\$7,284
- Non-All Electric	50	151	\$89.58	\$4,479								
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump			\$0.00	\$0	1,200	0	\$0.03114	\$0	\$0	\$0	\$0	\$0
- Resistance Heat	0	0			446	0	\$0.03116	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat	0	0	\$0.00	\$0								
High - Efficiency Heat Pump			\$450.00	\$20,250	1,144	239,096	\$0.04346	\$10,391	\$3,564	\$0	\$3,564	\$34,205
- Mobile Home	45	209										
Mobile Home New Construction ***			\$551.94	\$71,200	1,808	770,208	\$0.04348	\$33,489	\$16,120	\$0	\$16,120	\$120,809
- Heat Pump	129	426			158	0	\$0.04343	\$0	\$0	\$0	\$0	\$0
- Air Conditioner	0	0	\$0.00	\$0								
Modified Energy Fitness	485	2,113	\$353.79	\$171,590	612	1,293,156	\$0.04349	\$56,239	\$20,409	\$0	\$20,409	\$248,238
TOTAL RESIDENTIAL PROGRAMS	809	3,320		\$355,501		2,721,352		\$118,331	\$41,080	\$4,399	\$45,479	\$519,311
	=====	=====		=====		=====		=====	=====	=====	=====	=====
COMMERCIAL PROGRAMS			\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - New Building	0	0	\$0.00	\$0								
TOTAL COMMERCIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
	=====	=====		=====		=====		=====	=====	=====	=====	=====
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)			\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0								
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
	=====	=====		=====		=====		=====	=====	=====	=====	=====
TOTAL COMPANY	809	3,320		\$355,501		2,721,352		\$118,331	\$41,080	\$4,399	\$45,479	\$519,311
	=====	=====		=====		=====		=====	=====	=====	=====	=====

\* Lost revenue and efficiency incentives are based on prospective values.  
\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2005.  
\*\*\* Participants since 07/01/2005.

Year 2008												Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM												PAGE 14A of
												18
YEAR 13 (1st HALF)	NEW	CUMULATIVE	TOTAL ESTIMATED	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING		TOTAL
PROGRAM DESCRIPTIONS	PARTICIPANT	PARTICIPANT	PROGRAM	PROGRAM	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	COSTS TO BE
	NUMBER	NUMBER **	PER	COSTS	(KWH/ PARTICIPANT)	KWH/ HALF	(\$/KWH)	REVENUES	(EX. C, PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			(1)X(3)	(2)X(5)	(6)X(7)	(8)X(9)	(9)X(10)	(10)X(11)	(11)X(12)	(12)X(13)	(13)X(14)	(14)X(15)
RESIDENTIAL PROGRAMS												
Energy Fitness	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency												
- All Electric	119	521	\$1,358.15	\$161,620	1,016	529,336	\$0.04346	\$23,005	\$9,189	\$0	\$9,189	\$193,814
- Non-All Electric	56	196	\$83.11	\$4,654	568	111,328	\$0.04345	\$4,837	\$3,454	\$0	\$3,454	\$12,945
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Mobile Home	61	252	\$457.38	\$27,900	875	220,500	\$0.04346	\$9,583	\$8,539	\$0	\$8,539	\$46,022
Mobile Home New Construction ***												
- Heat Pump	95	520	\$552.63	\$28,900	861	447,720	\$0.04348	\$19,467	\$10,597	\$0	\$10,597	\$82,564
- Air Conditioner	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Modified Energy Fitness	560	2,612	\$361.32	\$202,339	435	1,136,220	\$0.04349	\$49,414	\$27,871	\$0	\$27,871	\$279,624
TOTAL RESIDENTIAL PROGRAMS	891	4,101	\$449,013	\$272,520	2,445	2,445,104	\$106,306	\$59,650	\$0	\$59,650	\$614,969	
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL COMMERCIAL PROGRAMS	0	0	\$0	\$0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
INDUSTRIAL PROGRAMS - (w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0	\$0	\$0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL COMPANY	891	4,101	\$449,013	\$272,520	2,445	2,445,104	\$106,306	\$59,650	\$0	\$59,650	\$614,969	

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2005.

\*\*\* Participants since 07/01/2005.

Year 2008												Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM												PAGE 14B of
YEAR 13 (2nd HALF)												18
PROGRAM DESCRIPTIONS	NEW	CUMULATIVE	TOTAL ESTIMATED	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING		TOTAL
	PARTICIPANT	PARTICIPANT	PROGRAM	PROGRAM	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	ACTUAL
	NUMBER	NUMBER **	PER	COSTS	(KWH/	KWH/	(\$/KWH)	REVENUES	(EX. C,	(5% of	INCENTIVE	RECOVERED
	(1)	(2)	PARTICIPANT	(4)	PARTICIPANT)	HALF	(7)	(8)	PG.17B)	COSTS)	(11)	(12)
			(3)	(1)X(3)	(5)	(6)		(6)X(7)	(9)	(10)	(9)+(10)	(4)+(8)+(11)
RESIDENTIAL PROGRAMS												
Energy Fitness	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency	89	545	\$991.21	\$88,218	1,016	553,720	\$0.04346	\$24,065	\$6,873	\$0	\$6,873	\$119,156
- All Electric	20	223	\$87.50	\$1,750	568	126,664	\$0.04345	\$5,504	\$1,234	\$0	\$1,234	\$8,488
- Non-All Electric	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
- Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump	74	289	\$442.57	\$32,750	874	252,586	\$0.04346	\$10,977	\$10,359	\$0	\$10,359	\$54,086
- Mobile Home	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Mobile Home New Construction	108	548	\$550.00	\$59,400	860	471,280	\$0.04348	\$20,491	\$12,047	\$0	\$12,047	\$91,938
- Heat Pump	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
- Air Conditioner	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Modified Energy Fitness	440	2,793	\$356.35	\$156,792	435	1,214,955	\$0.04349	\$52,838	\$21,899	\$0	\$21,899	\$231,529
TOTAL RESIDENTIAL PROGRAMS	731	4,398		\$338,910		2,619,205		\$113,875	\$52,412	\$0	\$52,412	\$505,197
COMMERCIAL PROGRAMS												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL COMMERCIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
INDUSTRIAL PROGRAMS -												
(w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0
TOTAL COMPANY	731	4,398		\$338,910		2,619,205		\$113,875	\$52,412	\$0	\$52,412	\$505,197

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 01/01/2006.

Year 2009													Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM												PAGE 15A of	18
	NEW	CUMULATIVE	AVERAGE ACTUAL	TOTAL ACTUAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING		TOTAL	
	PARTICIPANT	PARTICIPANT	PROGRAM COSTS	PROGRAM	REV/QTRS	ENERGY SAVINGS	LOST	NET * LOST	INCENTIVE	INCENTIVE	TOTAL *	COSTS TO BE	
PROGRAM DESCRIPTIONS	NUMBER	NUMBER	PER PARTICIPANT	COSTS	(KWH/ PARTICIPANT)	KWH/ HALF	(\$/KWH)	REVENUES	(EX. C, PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
			(4) / (1)			(2)X(5)		(6)X(7)		(4)X(5%)	(9)+(10)	(4)+(8)+(11)	
<b>RESIDENTIAL PROGRAMS</b>													
Energy Fitness	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Targeted Energy Efficiency													
- All Electric	119	575	** \$1,060.16	\$126,159	1,016	584,200	\$0.04346	\$25,389	\$9,189	\$0	\$9,189	\$160,737	
- Non-All Electric	22	210	** \$93.27	\$2,052	568	119,280	\$0.04352	\$5,191	\$1,357	\$0	\$1,357	\$8,600	
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
- Non Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Mobile Home	61	299	** \$449.18	\$27,400	875	261,625	\$0.04350	\$11,381	\$8,539	\$0	\$8,539	\$47,320	
Mobile Home New Construction													
- Heat Pump	88	552	** \$552.84	\$48,650	861	475,272	\$0.04351	\$20,679	\$9,816	\$0	\$9,816	\$79,145	
- Air Conditioner	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Modified Energy Fitness	425	2,775	** \$383.51	\$162,993	435	1,207,125	\$0.04345	\$52,450	\$21,152	\$0	\$21,152	\$236,595	
High Efficiency Heat Pump													
- Resistance Heat Replacement	28	7	*** \$305.36	\$8,550	1,879	13,153	\$0.04349	\$572	\$13,387	\$0	\$13,387	\$22,509	
- Heat Pump Replacement	61	16	*** \$442.62	\$27,000	301	4,816	\$0.04353	\$210	\$0	\$1,350	\$1,350	\$28,560	
Energy Education for Student Program (NEED)	0	0	*** \$0.00	\$8,139	92	0	\$0.04370	\$0	\$0	\$0	\$0	\$8,139	
Community Outreach Program (CFL)	926	149	*** \$5.84	\$5,404	92	13,708	\$0.04370	\$599	\$4,621	\$0	\$4,621	\$10,624	
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>1,730</b>	<b>4,583</b>		<b>\$416,347</b>		<b>2,679,179</b>		<b>\$116,471</b>	<b>\$68,061</b>	<b>\$1,350</b>	<b>\$69,411</b>	<b>\$602,229</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	
<b>COMMERCIAL PROGRAMS</b>													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	
<b>INDUSTRIAL PROGRAMS -</b>													
(w/Est. Opt-Outs Removed)													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	
<b>TOTAL COMPANY</b>	<b>1,730</b>	<b>4,583</b>		<b>\$416,347</b>		<b>2,679,179</b>		<b>\$116,471</b>	<b>\$68,061</b>	<b>\$1,350</b>	<b>\$69,411</b>	<b>\$602,229</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 07/01/2006.

\*\*\* Cumulative participants include a reduction for the cumulative participants as of 01/01/2009 (High Efficiency Heat Pump, Energy Education for Students and Community Outreach Program (CFL)).



Year 2009													Exhibit C
KENTUCKY POWER COMPANY													PAGE
ESTIMATED SECTOR SURCHARGES FOR 3													18
YEAR PROGRAM													
YEAR 14 (2nd HALF)	NEW	CUMULATIVE	AVERAGE	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING		TOTAL	
	PARTICIPANT	PARTICIPANT	ACTUAL	ACTUAL	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	ACTUAL	
PROGRAM DESCRIPTIONS	NUMBER	NUMBER	PER	COSTS	(KWH/	KWH/	(\$/KWH)	REVENUES	(EX. C.	(5% of	INCENTIVE	RECOVERED	
	(1)	(2)	PARTICIPANT	(4)	PARTICIPANT)	HALF	(7)	(8)	PG.17B)	COSTS)	(11)	(12)	
			(3)		(5)	(6)		(6)X(7)	(9)	(10)	(9)+(10)	(4)+(8)+(11)	
			(4) / (1)			(2)X(5)			(4)X(5%)				
RESIDENTIAL PROGRAMS													
Energy Fitness	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Targeted Energy Efficiency													
- All Electric	140	620	** \$993.48	\$139,087	1,016	629,920	\$0.04346	\$27,376	\$10,811	\$0	\$10,811	\$177,274	
- Non-All Electric	61	200	** \$101.34	\$6,182	568	113,600	\$0.04352	\$4,944	\$3,762	\$0	\$3,762	\$14,888	
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
- Non Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Mobile Home	99	342	** \$449.49	\$44,500	874	298,908	\$0.04350	\$13,002	\$13,859	\$0	\$13,859	\$71,361	
Mobile Home New Construction													
- Heat Pump	103	556	** \$544.17	\$56,050	860	478,160	\$0.04351	\$20,805	\$11,490	\$0	\$11,490	\$88,345	
- Air Conditioner	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Modified Energy Fitness	375	2,631	** \$372.99	\$139,871	435	1,144,485	\$0.04345	\$49,728	\$18,664	\$0	\$18,664	\$208,263	
High Efficiency Heat Pump													
- Resistance Heat Replacement	63	60	*** \$514.29	\$32,400	1,879	112,740	\$0.04349	\$4,903	\$30,120	\$0	\$30,120	\$67,423	
- Heat Pump Replacement	156	144	*** \$451.92	\$70,500	300	43,200	\$0.04353	\$1,880	\$0	\$3,525	\$3,525	\$75,905	
Energy Education for Student Program (NEED)	1,130	558	*** \$8.00	\$9,045	92	51,336	\$0.04370	\$2,243	\$5,627	\$0	\$5,627	\$16,915	
Community Outreach Program (CFL)	2,818	2,501	*** \$10.19	\$28,715	92	230,092	\$0.04370	\$10,055	\$14,062	\$0	\$14,062	\$52,832	
TOTAL RESIDENTIAL PROGRAMS	4,945	7,612		\$526,350		3,102,441		\$134,936	\$108,395	\$3,525	\$111,920	\$773,206	
COMMERCIAL PROGRAMS													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
TOTAL COMMERCIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0	
INDUSTRIAL PROGRAMS -													
(w/Est. Opt-Outs Removed)													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0		0		\$0	\$0	\$0	\$0	\$0	
TOTAL COMPANY	4,945	7,612		\$526,350		3,102,441		\$134,936	\$108,395	\$3,525	\$111,920	\$773,206	

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 01/01/2007.

\*\*\* Cumulative participants include a reduction for the cumulative participants as of 01/01/2009 (High Efficiency Heat Pump, Energy Education for Students and Community Outreach Program (CFL)).

Year 2010												Exhibit C	
KENTUCKY POWER COMPANY												PAGE	
ESTIMATED SECTOR SURCHARGES FOR 3												18	
YEAR PROGRAM													
YEAR 15 (1st HALF)	NEW	CUMULATIVE	AVERAGE	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING		TOTAL	
	PARTICIPANT	PARTICIPANT	ACTUAL	ACTUAL	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	ACTUAL	
PROGRAM DESCRIPTIONS	NUMBER	NUMBER	PER	COSTS	(KWH/	KWH/	(\$/KWH)	REVENUES	(EX. C,	(5% of	INCENTIVE	RECOVERED	
	(1)	(2)	PARTICIPANT	(4)	PARTICIPANT)	HALF	(7)	(8)	PG.17B)	(10)	(11)	(12)	
			(3)		(5)	(6)		(6)	(9)	(4)X(5%)	(9)+(10)	(4)+(8)+(11)	
			(4) / (1)			(2)X(5)		(6)X(7)					
RESIDENTIAL PROGRAMS													
Energy Fitness	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
Targeted Energy Efficiency													
- All Electric	174	720	**	\$1,161.51	\$202,103	1,016	731,520	\$0.04346	\$31,792	\$13,436	\$0	\$13,436	\$247,331
- Non-All Electric	31	237	**	\$114.10	\$3,537	568	134,616	\$0.04352	\$5,858	\$1,912	\$0	\$1,912	\$11,307
Compact Fluorescent Bulb	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Resistance Heat	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
- Non Resistance Heat	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Mobile Home	97	416	**	\$422.16	\$40,950	875	364,000	\$0.04350	\$15,834	\$13,579	\$0	\$13,579	\$70,363
Mobile Home New Construction													
- Heat Pump	115	621	**	\$527.83	\$60,700	861	534,681	\$0.04351	\$23,264	\$4,462	\$0	\$4,462	\$88,426
- Air Conditioner	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
Modified Energy Fitness	501	2,762	**	\$392.89	\$196,836	435	1,201,470	\$0.04345	\$52,204	\$24,935	\$0	\$24,935	\$273,975
High Efficiency Heat Pump													
- Resistance Heat Replacement	97	135	***	\$450.00	\$43,650	1,879	253,665	\$0.04349	\$11,032	\$46,376	\$0	\$46,376	\$101,058
- Heat Pump Replacement	272	348	***	\$416.73	\$113,350	301	104,748	\$0.04353	\$4,560	\$0	\$5,668	\$5,668	\$123,578
Energy Education for Student Program (NEED)	488	1,299	***	\$50.99	\$24,881	73	94,827	\$0.04327	\$4,103	\$2,430	\$0	\$2,430	\$31,414
Community Outreach Program (CFL)	2,643	4,482	***	\$16.10	\$42,564	91	407,862	\$0.04376	\$17,848	\$13,189	\$0	\$13,189	\$73,601
TOTAL RESIDENTIAL PROGRAMS	4,418	11,020			\$728,571		3,827,389		\$166,495	\$120,319	\$5,668	\$125,987	\$1,021,053
COMMERCIAL PROGRAMS													
Smart Audit - Class 1	0	0		\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	
- Class 2	0	0		\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	
Smart Financing - Existing Building	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
Smart Financing - New Building	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
TOTAL COMMERCIAL PROGRAMS	0	0			\$0		0		\$0	\$0	\$0	\$0	
INDUSTRIAL PROGRAMS -													
(w/Est. Opt-Outs Removed)													
Smart Audit - Class 1	0	0		\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	
Smart Audit - Class 2	0	0		\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	
Smart Financing - General	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
Smart Financing - Compressed Air System	0	0		\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	
TOTAL INDUSTRIAL PROGRAMS	0	0			\$0		0		\$0	\$0	\$0	\$0	
TOTAL COMPANY	4,418	11,020			\$728,571		3,827,389		\$166,495	\$120,319	\$5,668	\$125,987	\$1,021,053

\* Lost revenue and efficiency incentives are based on prospective values.

\*\* Cumulative participants include a reduction for the cumulative participants as of 01/01/2007.

\*\*\* Cumulative participants include a reduction for the cumulative participants as of 01/01/2009 (High Efficiency Heat Pump, Energy Education for Students and Community Outreach Program (CFL)).

Year 2010													Exhibit C
KENTUCKY POWER COMPANY ESTIMATED SECTOR SURCHARGES FOR 3 YEAR PROGRAM													PAGE 16B of
													18
YEAR 15 (3rd QTR)	NEW	CUMULATIVE	AVERAGE	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING	TOTAL		
	PARTICIPANT	PARTICIPANT	ESTIMATED	ESTIMATED	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	ESTIMATED	
PROGRAM DESCRIPTIONS	NUMBER	NUMBER	PER	COSTS	(KWH/ PARTICIPANT)	KWH/ QTR	(\$/KWH)	REVENUES	(EX. C, PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
			(4) / (1)			(2)X(5)		(6)X(7)		(4)X( 5%)	(9)+(10)	(4)+(8)+(11)	
<b>RESIDENTIAL PROGRAMS</b>													
Energy Fitness	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Targeted Energy Efficiency													
- All Electric	120	60	** \$988.20	\$118,584	508	30,480	\$0.05746	\$1,751	\$9,266	\$0	\$9,266	\$129,601	
- Non-All Electric	23	11	** \$111.00	\$2,553	284	3,124	\$0.05746	\$180	\$1,419	\$0	\$1,419	\$4,152	
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
- Non Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
High - Efficiency Heat Pump													
- Mobile Home	26	13	** \$553.85	\$14,400	437	5,681	\$0.05750	\$327	\$3,640	\$0	\$3,640	\$18,367	
Mobile Home New Construction													
- Heat Pump	27	14	** \$644.44	\$17,400	430	6,020	\$0.05745	\$346	\$3,012	\$0	\$3,012	\$20,758	
- Air Conditioner	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Modified Energy Fitness	348	174	** \$406.84	\$141,582	218	37,932	\$0.05752	\$2,182	\$17,320	\$0	\$17,320	\$161,084	
High Efficiency Heat Pump													
- Resistance Heat Replacement	51	26	** \$450.00	\$22,950	940	24,440	\$0.05748	\$1,405	\$24,383	\$0	\$24,383	\$48,738	
- Heat Pump Replacement	126	63	** \$521.83	\$65,750	150	9,450	\$0.05750	\$543	\$0	\$3,288	\$3,288	\$69,581	
Energy Education for Student Program (NEED)	486	162	** \$6.30	\$3,060	37	5,994	\$0.05714	\$342	\$2,420	\$0	\$2,420	\$5,822	
Community Outreach Program (CFL)	1,060	540	** \$6.22	\$6,718	45	24,300	\$0.05768	\$1,402	\$5,389	\$0	\$5,389	\$13,509	
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>2,287</b>	<b>1,063</b>		<b>\$392,997</b>		<b>147,421</b>		<b>\$8,478</b>	<b>\$66,849</b>	<b>\$3,288</b>	<b>\$70,137</b>	<b>\$471,612</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	
<b>COMMERCIAL PROGRAMS</b>													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
- Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - New Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL COMMERCIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	
<b>INDUSTRIAL PROGRAMS -</b>													
(w/Est. Opt-Outs Removed)													
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0	
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL INDUSTRIAL PROGRAMS</b>	<b>0</b>	<b>0</b>		<b>\$0</b>		<b>0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	
<b>TOTAL COMPANY</b>	<b>2,287</b>	<b>1,063</b>		<b>\$392,997</b>		<b>147,421</b>		<b>\$8,478</b>	<b>\$66,849</b>	<b>\$3,288</b>	<b>\$70,137</b>	<b>\$471,612</b>	
	=====	=====		=====		=====		=====	=====	=====	=====	=====	

\* Lost revenue and efficiency incentives are based on prospective values.  
\*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2010.

Year 2010

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3  
YEAR PROGRAM

PROGRAM DESCRIPTIONS	NEW	CUMULATIVE	AVERAGE	TOTAL	NET LOST	TOTAL	NET	TOTAL	EFFICIENCY	MAXIMIZING	TOTAL ESTIMATED	
	PARTICIPANT	PARTICIPANT	ESTIMATED	ESTIMATED	REV/QTRS	ENERGY	LOST	NET *	INCENTIVE	INCENTIVE	TOTAL *	COSTS TO BE
	NUMBER	NUMBER	PROGRAM	PROGRAM	(KWH/ PARTICIPANT)	SAVINGS	REVENUE	LOST	(EX. C, PG.17B)	(5% of COSTS)	INCENTIVE	RECOVERED
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		(4) / (1)			(2)X(5)		(6)X(7)		(4)X(5%)	(9)+(10)	(4)+(8)+(11)	
RESIDENTIAL PROGRAMS												
Energy Fitness	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Targeted Energy Efficiency												
- All Electric	121	180	** \$980.03	\$118,584	508	91,440	\$0.05746	\$5,254	\$9,344	\$0	\$9,344	\$133,182
- Non-All Electric	24	35	** \$111.00	\$2,664	284	9,940	\$0.05746	\$571	\$1,480	\$0	\$1,480	\$4,715
Compact Fluorescent Bulb	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
High - Efficiency Heat Pump												
- Resistance Heat	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
- Non Resistance Heat												
High - Efficiency Heat Pump												
- Mobile Home	27	40	** \$450.00	\$12,150	437	17,480	\$0.05750	\$1,005	\$3,780	\$0	\$3,780	\$16,935
Mobile Home New Construction												
- Heat Pump	28	41	** \$550.00	\$15,400	430	17,630	\$0.05745	\$1,013	\$3,123	\$0	\$3,123	\$19,536
- Air Conditioner	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Modified Energy Fitness												
High Efficiency Heat Pump												
- Resistance Heat Replacement	48	75	** \$450.00	\$21,600	939	70,425	\$0.05748	\$4,048	\$22,949	\$0	\$22,949	\$48,597
- Heat Pump Replacement	126	189	** \$450.00	\$56,700	150	28,350	\$0.05750	\$1,630	\$0	\$2,835	\$2,835	\$61,165
Energy Education for Student Program (NEED)												
Community Outreach Program (CFL)												
Residential Efficient Products												
- Compact Fluorescent Lamp (CFL)	31,250	14,042	\$1.58	\$49,250	10	140,420	\$0.05736	\$8,054	\$21,563	\$0	\$21,563	\$78,867
- Ceiling Fan w/Energy Star Light Fixture	50	23	\$4.50	\$225	36	828	\$0.05750	\$48	\$53	\$0	\$53	\$326
- LED Holiday Lights	75	13	\$10.00	\$750	1	13	\$0.04000	\$1	\$0	\$38	\$38	\$789
- LED Night Light	75	38	\$1.67	\$125	4	152	\$0.06000	\$9	\$0	\$6	\$6	\$140
HVAC Diagnostic & Tune-Up												
- Air Conditioner	60	30	\$174.75	\$10,485	78	2,340	\$0.05749	\$135	\$79	\$0	\$79	\$10,699
- Heat Pump	40	19	\$262.13	\$10,485	185	3,515	\$0.05749	\$202	\$455	\$0	\$455	\$11,142
<b>TOTAL RESIDENTIAL PROGRAMS</b>	<b>34,078</b>	<b>17,730</b>		<b>\$449,777</b>		<b>600,990</b>		<b>\$34,534</b>	<b>\$89,284</b>	<b>\$2,879</b>	<b>\$92,163</b>	<b>\$576,474</b>

Year 2010

KENTUCKY POWER COMPANY  
ESTIMATED SECTOR SURCHARGES FOR 3  
YEAR PROGRAM

YEAR 15 (4th QTR)	NEW PARTICIPANT	CUMULATIVE PARTICIPANT	AVERAGE ESTIMATED PROGRAM COSTS	TOTAL ESTIMATED PROGRAM COSTS	NET LOST REV/QTRS	TOTAL ENERGY SAVINGS	NET LOST REVENUE	TOTAL NET * LOST	EFFICIENCY INCENTIVE	MAXIMIZING INCENTIVE	TOTAL * INCENTIVE	TOTAL ESTIMATED COSTS TO BE RECOVERED
PROGRAM DESCRIPTIONS	NUMBER (1)	NUMBER (2)	PER PARTICIPANT COSTS (3)	COSTS (4)	(KWH/ PARTICIPANT) (5)	KWH/ QTR (6)	(\$/KWH) (7)	REVENUES (8)	(EX. C, PG.17B) (9)	(5% of COSTS) (10)	INCENTIVE (11)	RECOVERED (12)
			(4) / (1)			(2)X(5)		(6)X(7)		(4)X(5%)	(9)+(10)	(4)+(8)+(11)
COMMERCIAL PROGRAMS			\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
- Class 2	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Existing Building	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - New Building												
Commercial A/C & Heat Pump Program	50	22	\$586.00	\$29,300	70	1,540	\$0.05444	\$84	\$47	\$0	\$47	\$29,431
- Air Conditioner Replacement	10	4	\$590.00	\$5,900	279	1,116	\$0.05448	\$61	\$581	\$0	\$581	\$6,542
- Heat Pump Replacement												
HVAC Diagnostic & Tune-Up	26	12	\$247.38	\$6,432	172	2,064	\$0.05450	\$112	\$188	\$0	\$188	\$6,732
- Air Conditioner	4	2	\$132.00	\$528	409	818	\$0.05451	\$45	\$29	\$0	\$29	\$602
- Heat Pump												
TOTAL COMMERCIAL PROGRAMS	90	40		\$42,160		5,538		\$302	\$845	\$0	\$845	\$43,307
INDUSTRIAL PROGRAMS -												
(w/Est. Opt-Outs Removed)												
Smart Audit - Class 1	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Audit - Class 2	0	0	\$0.00	\$0	0	0	n/a	\$0	\$0	\$0	\$0	\$0
Smart Financing - General	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
Smart Financing - Compressed Air System	0	0	\$0.00	\$0	0	0	\$0.00000	\$0	\$0	\$0	\$0	\$0
TOTAL INDUSTRIAL PROGRAMS	0	0		\$0				\$0	\$0	\$0	\$0	\$0
TOTAL COMPANY	34,168	17,770		\$491,937		606,528		\$34,836	\$90,129	\$2,879	\$93,008	\$619,781

\* Lost revenue and efficiency incentives are based on prospective values.  
 \*\* Cumulative participants include a reduction for the cumulative participants as of 06/30/2010.



KENTUCKY POWER COMPANY  
DERIVATION FOR  
3 YEAR DSM EXPERIMENT  
CALCULATION OF  
EFFICIENCY INCENTIVE

PROGRAM DESCRIPTIONS	ANNUAL SHARED SAVINGS (\$)																														
	YEAR 1	YEAR 2	YEAR 3		YEAR 4		YEAR 5		YEAR 6		YEAR 7		YEAR 8		YEAR 9		YEAR 10		YEAR 11		YEAR 12		YEAR 13		YEAR 14		YEAR 15				
	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	
	(11X18)	(11X19)	(21X10)	(21X11)	(21X12)	(31X13)	(31X14)	(31X15)	(31X16)	(31X17)	(31X18)	(41X19)	(41X20)	(41X21)	(41X22)	(41X23)	(41X24)	(51X25)	(51X26)	(51X27)	(51X28)	(51X29)	(51X30)	(61X31)	(61X32)	(71X33)	(71X34)	(71X35)	(71X36)		
		1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half		
RESIDENTIAL PROGRAMS																															
Energy Fitness	\$43,177	\$21,354	\$14,317	\$11,304	\$9,309	\$10,370	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Targeted Energy Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
- All Electric	\$719	\$352	\$154	\$40	\$70	\$60	\$40	\$141	\$105	\$90	\$231	\$137	\$56	\$30	\$295	\$43	\$308	\$1,125	\$913	\$671	\$908	\$572	\$397	\$3,454	\$1,234	\$1,357	\$3,762	\$1,912	\$1,419	\$1,490	
- Non-All Electric	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Compact Fluorescent Bulb	\$425	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
High - Efficiency Heat Pump	\$10,634	\$2,427	\$1,588	\$152	\$789	\$4,375	\$0	\$6,187	\$1,679	\$0	\$1,105	\$1,016	\$1,326	\$44	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
- Resistance Heat	\$9,798	\$2,070	\$5,414	\$757	\$1,653	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
- Non-Resistance Heat	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
High - Efficiency Heat Pump	\$13,634	\$4,236	\$4,128	\$2,145	\$5,023	\$8,505	\$11,284	\$3,789	\$3,021	\$4,463	\$3,958	\$1,244	\$1,244	\$903	\$639	\$1,186	\$1,330	\$2,693	\$3,168	\$3,602	\$3,564	\$3,960	\$3,554	\$9,539	\$10,359	\$8,539	\$13,659	\$13,579	\$3,640	\$3,780	
- Mobile Home	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Mobile Home New Construction ***	\$0	\$0	\$0	\$0	\$0	\$4,353	\$5,464	\$4,486	\$4,175	\$3,687	\$4,087	\$231	\$248	\$187	\$260	\$276	\$284	\$8,372	\$10,372	\$0	\$11,246	\$11,746	\$10,497	\$16,120	\$10,597	\$12,047	\$9,816	\$11,490	\$4,462	\$3,012	\$3,123
- Heat Pump	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
- Air Conditioner	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Modified Energy Fitness																															
High Efficiency Heat Pump																															
- Furnace Replacement																															
- Heat Pump Replacement																															
Energy Education for Student Program (NEED)																															
Community Outreach Program (CFL)																															
Residential Efficient Products																															
- Compact Fluorescent Lamp (CFL)																															
- Ceiling Fan w/Energy Star Light Fixture																															
- LED Holiday Lights																															
- LED Night Light																															
HVAC Diagnostic & Tune-Up																															
- Air Conditioner																															
- Heat Pump																															
TOTAL RESIDENTIAL PROGRAMS	\$77,585	\$30,339	\$25,001	\$14,398	\$17,645	\$27,663	\$22,975	\$10,095	\$9,005	\$9,256	\$9,602	\$1,656	\$1,548	\$3,327	\$10,681	\$6,539	\$10,155	\$27,602	\$28,823	\$34,234	\$39,783	\$36,700	\$41,080	\$59,650	\$52,412	\$69,061	\$108,395	\$120,319	\$66,849	\$89,284	
*** Participants since 09/01/09																															
COMMERCIAL PROGRAMS																															
Smart Audit - Class 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
- Class 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Existing Building	\$508	\$0	\$8,946	\$6,505	\$23,585	\$1,395	\$5,814	\$3,721	\$5,681	\$3,498	\$3,489	\$1,628	\$5,814	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Smart Financing - New Building	\$0	\$0	\$0	\$29	\$144	\$767	\$2,659	\$1,049	\$0	\$2,659	\$4,722	\$1,312	\$4,197	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Commercial A/C & Heat Pump Program																															
- Air Conditioner Replacement																															
- Heat Pump Replacement																															
HVAC Diagnostic & Tune-Up																															
- Air Conditioner																															
- Heat Pump																															
TOTAL COMMERCIAL PROGRAMS	\$508	\$0	\$8,946	\$6,535	\$23,729	\$2,182	\$7,813	\$4,770	\$5,581	\$5,587	\$8,210	\$2,940	\$10,011	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
INDUSTRIAL PROGRAMS																															
(w/Est. Det-Outs Removed)																															
Smart Audit - Class 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Smart Audit - Class 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Smart Financing - General	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Smart Financing - Compressed Air System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL INDUSTRIAL PROGRAMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ANNUAL SHARED SAVINGS (\$)	\$78,091	\$30,359	\$34,547	\$20,033	\$41,797	\$29,845	\$30,888	\$14,865	\$14,597	\$14,843	\$17,812	\$4,595	\$11,559	\$3,327	\$10,681	\$6,539	\$10,155	\$27,602	\$28,823	\$34,234	\$39,783	\$36,700	\$41,080	\$59,650	\$52,412	\$69,061	\$108,395	\$120,319	\$66,849	\$89,129	

KENTUCKY POWER COMPANY  
 FORECAST OF 2010 KENTUCKY RETAIL ENERGY SALES IN KWH  
 FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL SECTORS

PROGRAM YR 15 - 2010		RESIDENTIAL	COMMERCIAL	INDUSTRIAL
LINE NO.	YEAR	SECTOR	SECTOR	SECTOR
1	TOTAL ULTIMATE SALES (KWH) *	2,456,000,000	1,454,400,000	3,424,700,000
2	LESS NON-METERED **	14,736,000	8,726,400	20,548,200
3	TOTAL ESTIMATED RETAIL KWH SALES	2,441,264,000	1,445,673,600	3,404,151,800
4	LESS OPT - OUT CUSTOMERS KWH	0	0	0
5	KWH BEFORE LOST REVENUE IMPACTS	2,441,264,000	1,445,673,600	3,404,151,800
6	LESS LOST REVENUE IMPACTS ***	4,575,800	5,538	0
7	ADJUSTED KWH BY SECTOR	2,436,688,200	1,445,668,062	3,404,151,800
8	LINE 7/LINE 1	99.2%	99.4%	99.4%

LINE NO.	PROGRAM YR 15 (3rd QTR)	RESIDENTIAL SECTOR	COMMERCIAL SECTOR	INDUSTRIAL SECTOR
9	TOTAL ULTIMATE SALES (KWH) *	563,900,000	380,400,000	823,600,000
10	LINE 8	99.2%	99.4%	99.4%
11	ADJUSTED KWH BY SECTOR	559,388,800	378,117,600	818,658,400

LINE NO.	PROGRAM YR 15 (4th QTR)	RESIDENTIAL SECTOR	COMMERCIAL SECTOR	INDUSTRIAL SECTOR
12	TOTAL ULTIMATE SALES (KWH) *	621,600,000	352,600,000	896,200,000
13	LINE 8	99.2%	99.4%	99.4%
14	ADJUSTED KWH BY SECTOR	616,627,200	350,484,400	890,822,800

\* SOURCE: 2010 LOAD FORECAST COMPILED BY AEP CORPORATE PLANNING AND BUDGETING DEPT.

\*\* .60% ESTIMATED TO BE NON-METERED (OL) DETERMINED FROM BILLED JURISDICTIONAL TARIFF SUMMARY FOR 12 MOS. ENDED DECEMBER 2009.

***	LOST REVENUE IMPACTS	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
	Page 16A of 18, Column 6 - TOTAL PROGRAMS	3,827,389	0	0
	Page 16B of 18, Column 6 - TOTAL PROGRAMS	147,421	0	0
	Page 16C of 18, Column 6 - TOTAL PROGRAMS	600,990	5,538	0
	TOTAL	4,575,800	5,538	0





EVALUATION REPORT

For the

*ENERGY EDUCATION FOR STUDENTS  
PROGRAM*

In

Kentucky Power Company

Program Period: January 2009 - December 2009

Load Research Analysis  
American Electric Power Service Corporation

August, 2010

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## I. EXECUTIVE SUMMARY

This report provides the results of the process, market, and impact evaluations for the first year (2009) of Kentucky Power Company's Energy Education For Students Program (Program). This report also provides a cost-benefit analysis which utilizes the 2009 results to provide a prospective view for continuing the Program. The Program evaluations were based on engineering estimates, information obtained during program implementation, and specific information obtained from a participant follow-up survey conducted in May, 2010.

The Program was developed with the assistance of the Kentucky Power Company (KPCo) Demand-Side Management Collaborative (Collaborative) and was approved by the Public Service Commission (PSC) on February 24, 2009 (Case No. 2008-00349). The Program was developed to promote the conservation and efficient use of electricity by encouraging the use of energy efficient ENERGY STAR® compact fluorescent light bulbs (CFLs) in place of standard efficiency incandescent light bulbs. The major goals of the Program were: to provide education to students and their families as to the proper application of high efficiency CFLs; to encourage the use of energy efficiency measures in student's homes; to reduce customer usage of electric energy; to increase customer services & satisfaction; and to reduce KPCo's peak demand.

KPCo partnered with the Kentucky National Energy Education Development (NEED) Project to implement the Program with seventh grade students at participating middle schools within the KPCo service territory. NEED conducted workshops on a scheduled basis to ensure that all participating schools were provided the same information regarding the Energy Education For Students Program. Materials on energy, electricity, environment and economics were provided to the participating school and packages of four ENERGY STAR® CFLs were provided to every participating 7<sup>th</sup> grade student.

A participant follow-up survey was conducted by Thoroughbred Research Group during May 2010 using a randomly selected sample of Program participants. The survey results showed high levels of satisfaction among the participant's and their families. Approximately 95% of the program participant families surveyed said they were "very satisfied" or "satisfied" with the CFLs and, of those that recalled receiving the educational materials, 92% said they were either "very satisfied" or "satisfied" with the educational materials. The survey also indicated approximately 27% of program participants were free riders who would have purchased and installed CFLs in their homes had the program not been in place.

A teacher follow-up survey was also conducted by KPCo during May 2010 of which 60% responded. Those that did respond indicated that the NEED workshops and the education materials provided were valuable tools for promoting and teaching energy conservation measures to both them and their students.

For the 2009 Program, a total of 1,130 7<sup>th</sup> grade students received a four pack of CFLs, resulting in 4,520 CFLs. The results of the evaluation showed the Program to be cost-effective based on the Total Resource Cost (TRC) and Utility Cost (UC) economic tests. The Participant Cost (PC) economic test was not applicable as the participants incurred no direct costs. The Program's total net annual energy savings was estimated at 131.7 MWh, including transmission and distribution losses and free riders, based on the 1,130 actual participants for 2009. The total net Program demand reduction was estimated to be 14 kW in winter and 28 kW in summer, including Transmission and Distribution Losses and free riders.

## II. TECHNOLOGY DESCRIPTION

Kentucky Power's Energy Education For Students Program was developed to promote conservation and the efficient use of electricity by encouraging the use of high efficiency lighting by replacing standard efficiency incandescent bulbs with CFLs. Both incandescent lamps and CFLs consist of two parts: the base and the bulb. Both types of lighting are similar in that the base provides the electric current to the bulb where it excites the elements that give off visible light. However, a CFL uses less electricity to produce the same amount of light output (lumens), as an incandescent lamp thereby reducing the energy consumption and demand

The CFLs produce light differently than incandescent bulbs. For an incandescent bulb, the electric current continues through a wire filament and heats the filament until it starts to glow. For a CFL, a ballast is contained within the base, which supplies an electric current through a glass tube containing argon and a small amount of mercury vapor. The electric current generates an invisible ultraviolet light that excites a fluorescent coating, referred to as phosphor, on the inside of the glass tube, which emits visible light. All ENERGY STAR® qualified CFLs use electronic ballasts, rather than the original large and heavy magnetic ballasts that caused a buzzing noise in some bulbs.

CFLs require a little more energy when first turned on, but once the electric current starts moving through the glass tube, it uses about 75% less energy than incandescent bulbs, with a life expectancy about ten times greater. At current market prices the equipment savings due to the longer life covers the initial incremental cost of purchasing the more efficient CFL versus an incandescent bulb.

The estimated energy and demand savings are calculated by comparing the wattage of the incandescent bulb with the wattage of a CFL of equivalent lumens output. For example, a 75 watt

incandescent bulb can be replaced with a 23-Watt CFL of equal lumen output, resulting in an hourly energy savings of 52 watts.

Today's CFLs are more adaptable for residential lighting uses than were previous generations. Their small physical size, along with their instantaneous start, dimness capacity, and outdoor use allows for more applications in a residential structure. Additionally, there are certain ENERGY STAR® qualified CFLs that are designed to be used on dimmers and three-way switches. This information is included in customer education and promotion components of KPCo's Program to ensure that CFLs gain more acceptance among KPCo customers.

### **III. PROGRAM DESCRIPTION**

#### Program Overview:

The Energy Education For Students Program was designed as both an energy education program and as a program to promote energy efficient lighting in residential homes. KPCO worked in partnership with the Kentucky NEED Project to provide energy education materials to the participating middle schools and a package of four (4) ENERGY STAR® qualified CFLs to each seventh grade student at the participating schools. This allowed students to better understand the purpose and benefits of implementing energy efficient CFLs in their home and to study the capabilities and direct savings of CFLs.

#### Rationale for Program:

The lower wattage of CFLs versus the higher wattage of incandescent bulbs to attain the same level of lumens reduces energy consumption, which in-turn lowers the customer's monthly electric bill, and provides both energy and demand savings to KPCo. Additionally, the life of the high-efficiency CFLs exceeds that of the incandescent lamps by about a factor of ten, thus reducing equipment costs and adding another benefit of using this energy conservation measure in a customer's home. Although, today's higher purchase price could still be considered somewhat of a barrier which prevents customers from purchasing a CFL versus an incandescent bulb, this barrier is less overwhelming than in previous years, and can be overcome with additional education regarding the financial benefits of CFLs. Historically, CFLs were limited to specific home lighting applications, but improving CFL technology has created more applications for the use of CFLs.

Despite the increased availability and applicability of CFLs, there are still significant numbers of customers in the KPCo service territory that are not aware of the many benefits that CFLs provide. KPCo believes that the education of improved technology of energy efficient



products, such as CFLs, can have a significant benefit if targeted to students at schools within its service territory. Energy, economics, and environmental issues are currently taught in schools today and energy conservation affects each of these three issues. This Program also provides another low-cost avenue for KPCo to reach its customers via students of the participating schools.

Program Promotion:

During the 2009 school year between September and November, four school districts were selected that were exclusively within the KPCo service territory. The districts selected were Pike County Schools, Pikeville Independent Schools, Perry County Schools and Hazard Independent Schools. KPCo contacted the superintendent of each selected school district, described the Program and obtained their approval to implement the Program within their school district. KPCo staff then mailed invitations to selected middle school teachers within the school districts.

Program Implementation:

KPCo staff coordinated the enrollment of the participating middle schools, the scheduling of educational workshops in conjunction with the Kentucky NEED Project, and the delivery of educational materials and CFLs. The educational workshops were conducted to ensure that all participating middle schools received the same information concerning the Energy Education For Students Program. One workshop was scheduled in each area. Invitations were mailed to the teachers of each seventh grade class of each school district. The Program was introduced and described and each teacher received a workshop manual (cover sheet shown in Appendix A, Exhibit 1) containing a NEED Teacher Guide (Appendix A, Exhibit 2, pages 1 & 2) with educational materials on energy, electricity, the environment and economics. For those teachers unable to attend a scheduled workshop, KPCo staff scheduled a meeting with the teachers at the school to introduce the Program and provide the workshop manual with the educational materials. The teachers used the workshop manual as a teaching guide to introduce the Program and provided the educational

materials to their seventh grade class. Each student was given a form (Appendix A, Exhibit 3) to be filled out by their parents and returned to the teacher to verify that the parent is a KPCo customer. Upon receiving the completed forms from the students, KPCo personnel visited the school, collected the forms, and provided the four-packs of ENERGY STAR® qualified CFLs to the teachers to be given to the participating students. Providing the CFLs to the students for installation in their homes allowed a hands-on application to study the capabilities and benefits of CFLs.

#### IV. DATA COLLECTION

Various aspects of the Program needed to be evaluated in order to determine the Program's overall cost effectiveness, including market potential and penetration, customer satisfaction, persistence, free ridership and the net load impacts. In order to perform the Program analysis, information was collected from each participant through a data collection form, a participant follow-up survey was conducted in May, 2010, and a teacher follow-up survey was also conducted.

The data collection form (Exhibit 3) included the customer name, address, phone number and customer account number. Additionally, KPCo provided a Microsoft Excel spread sheet form to the teachers to complete the necessary information from the data collection form, plus some additional information, such as student's name and the name of the participating middle school. This information provided enough data to perform the necessary participant follow-up survey. Of the 1,130 students that participated in the Program, approximately 30% did not turn in the requested information, resulting in 778 participants with completed information.

The participant follow-up survey was designed to collect, from a randomly selected sample of participants, the information necessary to perform the program impact, process, and market evaluations. The survey was conducted using a telemarketing process. For the sample selection, the original list of 778 participants was reduced to 507 due to missing or incorrect phone numbers and/or duplicate or inactive customer account numbers. The information collected for the impact evaluation included the number of CFLs actually installed in the participant's home, the wattage of the incandescent bulb replaced, whether the CFLs are still in place, an estimate of how many hours and time of day they are normally operating and the locations in the home at which the CFLs were installed. The information collected for the process and market evaluations included whether the participants were previously installing CFLs in their homes, whether they would have purchased

CFLs in lieu of the Program, their satisfaction with the Program, the use of the CFLs in their homes, and the receptiveness of the education information in the view of the participating students. A teacher follow-up survey was also conducted via email to determine participating teacher's satisfaction with the workshop and the Program. The questionnaire and results of this survey are provided in Appendix C

Thoroughbred Research Group was hired to conduct the telemarketing survey for the Program participants. The firm experienced difficulty in making contact with the participant families. The 121 responses obtained provide results with expected accuracy of +/- 7.1% at a 90% confidence level. The questionnaire and results of the telemarketing participant survey are provided in Appendix B.

## V. PROCESS AND MARKET EVALUATION

The program's implementation during 2009 consisted of securing Program participants through middle schools within the KPCo service territory. The program provided for a low-cost means of educating both students and teachers on the benefits and savings available for the use of CFLs. It was expected that students would share the information with their families, thus promoting energy efficiency measures in a significant number of residential homes in selected areas of the KPCo service territory. The incentive to the participants and their households was that each student received education materials, a four-pack of ENERGY STAR® qualified CFLs, and potential energy savings resulting in savings with their electric bill.

### Process Analysis:

The process analysis of the Program utilized the recruitment tracking data from the spreadsheet form provided by the teachers and the results from the follow-up surveys. The delivery mechanism, promotional effectiveness, customer satisfaction, the teachers' satisfaction with NEED workshops and educational materials provided to promote the Program were evaluated.

**Delivery Mechanism:** KPCo utilized the Kentucky NEED Project workshops to deliver educational materials for the administration of the program by seventh grade teachers of participating middle schools. Each student was provided a four-pack of ENERGY STAR® qualified CFLs, minimizing delivery costs. The delivery mechanism was effective in that it utilized existing institutions to provide a low-cost means of distributing CFLs, all CFLs went to KPCo customers and, by reaching the youth, the program should enhance energy efficiency awareness in a group of people who can take steps to implement energy efficiency for many years.

Promotional Effectiveness: The promotion can be considered effective, as all four superintendents approached agreed to participation and all 7<sup>th</sup> grade teachers in the solicited school districts participated. With 1,130 student participants, KPCo was able to reach 95% of its 1,200 participant goal.

Customer Satisfaction: Overall satisfaction with the Program was very high, with 95% of the survey respondents indicating they were very satisfied (59%) or satisfied (36%) with receiving the energy efficient CFLs. Approximately 4% of the respondents surveyed expressed dissatisfaction with the CFLs because the CFLs either had a short life, took too long to light up, or provided unsatisfactory light output. In addition, 92% of the participants that remembered receiving the energy educational materials were either very satisfied (52%) or satisfied (40%) with the educational materials. The survey results also indicated that 16% of the respondents removed their CFLs from their home mainly due to lamp failure, while another 16% of the respondents never installed their CFLs because they did not believe they had an appropriate location to place them in their home. .

Teacher Satisfaction: 60% of the teachers responded to the teacher's follow-up survey and all of those that responded indicated the NEED workshop and educational materials were valuable tools for promoting and teaching energy conservation measures to both them and their students. Additionally, the teachers indicated that their seventh grade students were receptive in understanding the benefits of installing energy conservation measures in their home, such as CFLs.

#### Market Analysis:

In the analysis of the marketing of the Program, the product awareness, free ridership and market potential were examined. Results from the follow-up surveys and from the AEP 2010 Residential Appliance Saturation Survey for KPCo were utilized to perform the market analysis.

Product Awareness: The Participants' pre-program awareness of energy efficient CFLs was mixed with 41% of the participants surveyed having used CFLs in their home prior to the Program, and 59% of the participants surveyed having not previously used CFLs in their home.

Free riders: A free rider is a participant who utilized the provided CFLs, but would have purchased and installed equivalent CFLs had they not participated in the Program. From the survey responses, 27% of participants were identified as likely free riders in this program. However, only those participants who originally did not have CFLs in their homes (59%) were asked if they had planned to purchase CFLs for their home. Of those participants, 27% indicated they had planned to purchase some CFLs. However, 24% purchased additional CFLs since participating in the Program, and these additional purchases provided a potential spillover effect, providing additional energy savings. The remaining participants (41%) who had CFLs in their homes prior to the program were not asked the question to determine if they were free riders or if they provided spillover. Although the survey did not capture the total free riders or spillover for all participating customers, the available 27% free rider response was used for the entire participant group, and, to stay conservative in impact analysis, the spillover effects were ignored.

Market Potential: Based on the responses to the 2010 Residential Appliance Saturation Survey, it was determined that 13% to 25% of rooms in KPCo customer's homes utilize some CFLs as a source of lighting. The top three locations in the home where CFLs were the main source of lighting were the kitchen, living room and master bedroom, respectively. For all the locations in the home it can be said that three to six times more customers are still using incandescent bulbs for their main source of lighting. Therefore, there continues to be a significant market opportunity to promote energy efficient CFLs in the KPCo service territory.

## VI. IMPACT EVALUATION

### Findings:

Based on the first year of the three-year Program (2009-2011) with 1,130 participants, the net total Program annual energy savings was calculated to be 131.7 MWh (which includes Transmission and Distribution loss savings, persistence and free riders). On average, each participant was estimated to experience an annual energy savings of approximately 147 kWh at the meter (excluding free riders). The net total Program demand reduction was 14 kW in winter and 28 kW in summer (including Transmission and Distribution loss savings, persistence and free riders). These impacts resulted from demand reductions per participant of 15 Watts (W) and 31 W at the meter in winter and summer, respectively (excluding free riders). Table 1 summarizes the entire Program load impacts.

**Table 1: Average Load Impacts for Program**

Average Load Impacts	2009 Energy Education For Students Program
Annual Energy Savings/Participant	146.8 kWh
Winter Peak Demand Reduction/Participant	15 Watts
Summer Peak Demand Reduction/Participant	31 Watts
Net Total Program Energy Savings <sup>(1)</sup>	131.7 MWh
Net Total Program Winter Demand Reduction <sup>(2)</sup>	14.1 kW
Net Total Program Summer Demand Reduction <sup>(2)</sup>	28.3 kW

(1) Includes 8.7% T&D Losses

(2) Includes 10.8% T&D Losses



### Energy Impact Analysis:

The average energy savings per bulb was calculated by multiplying the average number of hours in use by the difference between each 23-Watt CFL installed and operating and the wattage of the incandescent bulb replaced. The participant follow-up survey conducted on a random sample of Program participants provided the number of CFLs installed in each participant's home, the average wattage of the incandescent bulbs replaced, the typical daily use of each CFL installed (in hours), and the time of day when the bulbs would normally be operating. The typical daily use of the CFLs per participant was multiplied by 351 days per year (assuming 2 weeks vacation per year) to arrive at the estimated annual usage per participant. The estimated energy savings per participant was multiplied by the number of participants to arrive at the total program annual energy. The net Program energy savings were calculated by incorporating the effects of free riders and transmission & distribution losses. No additional energy savings was credited to the possible spillover effects. Appendix C gives the details of the Energy Impact Analysis based on engineering estimates and the results of the participant follow-up survey.

### Demand Impact Analysis:

The peak demand reduction per participant was determined by the results of the participant follow-up survey. The survey provided the percent of participants that normally operated their CFLs during the time of peak hours for winter and summer. The percent normally operating during peak hours provided coincidence factors for summer and winter. The coincidence factors for the winter and summer were multiplied by the participant's average hourly demand reduction to arrive at the coincident peak demand reduction per participant at the time of winter and summer peaks. The total Program net coincident peaks for winter and summer were determined by applying the seasonal coincident peak demand reductions per participant to the number of participants, which included the

affect of free riders and then transmission & distribution losses. Appendix D gives the details of the Demand Impact Analysis.

## VII. COST-BENEFIT EVALUATION

### Results:

Cost-benefit analyses of DSM programs may be performed using either an historical basis or a prospective basis. From an historical basis, actual costs and load impacts for DSM program participants during a historical period (such as the first year of a program) are utilized to assess the net benefits. The net benefits may be calculated over the expected life of the installed measures and may be calculated over as much a 20-year period for the first year's participants. These are after-the-fact analyses which are normally utilized to determine the cost-effectiveness and cost-recovery of historical activity, but may not be representative of the future, and therefore, may not be the best basis for future DSM program decision-making.

Cost-benefit analyses from a prospective basis anticipate future DSM program participation, costs and impacts. These analyses expand upon actual field experience (cost, impact, etc.) to estimate the net benefit from projected implementation in the future. The foundation of DSM program knowledge serves as a basis to estimate projected costs, impacts, etc. This is the real value of field experience: applying what has been learned to guide decisions on future DSM program implementation. Cost-benefit analyses were performed on the Program with the existing measures of ENERGY STAR® qualified CFLs.

On a prospective basis the Program is found to be cost effective under the Total Resource Cost and the Utility Cost tests, not cost-effective from a RIM test perspective, and the Participant Cost test not being applicable, since there were no participant costs. Projecting continued implementation of the Program through 2011 yields the following economic test results in Table 2.

**Table 2: Economic Test Results**

<b>B/C Ratio</b>	<b>Economic Test</b>
1.85	Total Resource Test
0.41	Rate Impact Measure
1.49	Utility Cost
NA	Participant

Assumptions:

The cost/benefit analysis was performed using projected program costs based on the actual program costs realized in the first year of the Program. Based on the first year of the three year Program with a total of 1,130 participants, the total Program costs were \$ 17,184, plus the evaluation costs and participant follow-up survey costs, which occurred in 2010. The total Program costs also included the educational workshops and the cost of the compact fluorescent bulbs. Breakdowns of actual 2009 program costs are provided in Table 3.

**Table 3: Actual Program Costs**

<b>Item</b>	<b>2009/2010*</b>
Compact Fluorescent Bulbs	\$12,184
Educational Workshops	\$5,000
Participant Follow-Up Survey	\$5,650*
Program Evaluation	\$2,480*
<b>Total Program Cost</b>	<b>\$25,314</b>

\*2010 costs refer to follow-up survey and evaluation costs only for the 2009 Program.

The anticipated Program costs for future implementation are shown below in Table 4, based on 1,700 and 2,000 participants proposed for 2010 and 2011, respectively.

**Table 4: Projected Program Costs**

Item	2010	2011
Compact Fluorescent Bulbs	\$17,000	\$20,000
Educational Workshops	\$5,000	\$5,000
Participant Follow-Up Survey	\$0	\$6,000
Program Evaluation	\$0	\$2,500
<b>Total Program Cost</b>	<b>\$22,000</b>	<b>\$33,500</b>

Additional measure/program characteristics based on the three-years of the program and assumed for the cost/benefit analysis are:

- A. Life of the compact fluorescent bulbs assumed at 6.2 years, with no replacement
- B. Impacts of the CFLs were reduced to 60% after 2012 due to new government lighting standards
- C. 27% Free riders and 68% Persistence
- D. Compact Fluorescent Bulbs (4-Pack of 23 watt CFLs): \$ 10 per 4-Pack
- E. Evaluation costs set at \$2,500
- F. Follow-up survey costs @ \$6,000
- G. Includes T&D loss savings of 8.7% for energy and 10.8% for demand
- H. Educational Workshops at \$5,000

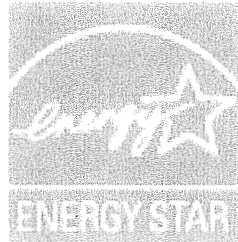
The assumed load impacts are described in Appendix D.

## VIII. APPENDIX

### Appendix A – Exhibits

#### Exhibit 1 – Cover Sheet of Workshop Manual

Change the World, Start with ENERGY STAR®

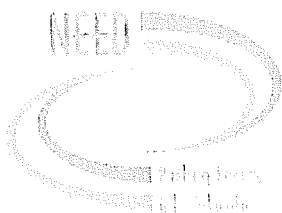


in partnership with



# Change the World Start with ENERGY STAR®

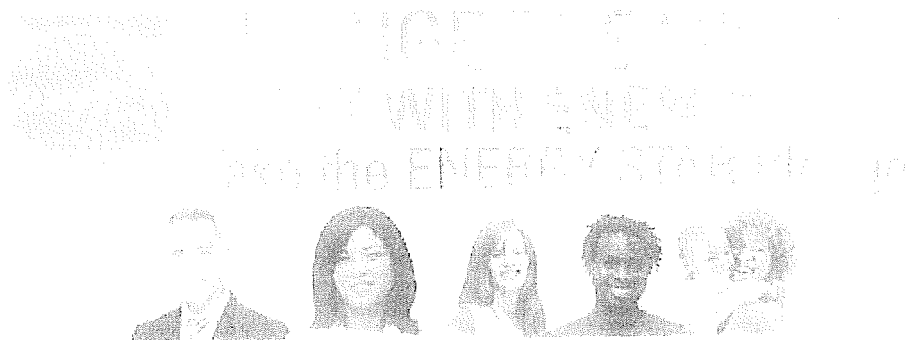
## NEED Teacher Guide



THE NEED PROJECT  
P.O. BOX 10101 • MANASSAS, VA 20108  
1-800-875-5029 • [www.NEED.org](http://www.NEED.org)

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"I will do my part to save energy and help fight global warming. I pledge to change a light and do even more."

- Replace at least one light in my home with an ENERGY STAR® qualified one.
- Make sure my home is well sealed and insulated.
- Choose ENERGY STAR® qualified equipment for my home office.
- Enable my ENERGY STAR® computer and monitor to sleep while I'm away.
- Choose ENERGY STAR® qualified products for my kitchen and laundry.



### Exhibit 3 – Data Collection Form

Dear Parent or Guardian:

Kentucky Power in partnership with the National Energy Education Development (NEED) Project will be providing energy education materials and a package of four (4) compact fluorescent bulbs (approximate cost \$10) to 7th grade students within the Kentucky Power service territory. To verify that you are a Kentucky Power customer, please provide the following information on behalf of your student and have him or her return it to their classroom.

Customer (Account) Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_


State Kentucky (State number is for postal delivery purposes only)

Zip \_\_\_\_\_ Phone \_\_\_\_\_

Kentucky Power Electricity Bill Account Number. Example: 000-000-000-0-0

\_\_\_\_\_

Thank you for participating in Kentucky Power's Energy Education for Students Program



Dear Parent or Guardian:

Kentucky Power in partnership with the National Energy Education Development (NEED) Project will be providing energy education materials and a package of four (4) compact fluorescent bulbs (approximate cost \$10) to 7th grade students within the Kentucky Power service territory. To verify that you are a Kentucky Power customer, please provide the following information on behalf of your student and have him or her return it to their classroom.

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City \_\_\_\_\_


State Kentucky (State number is for postal delivery purposes only)

Zip \_\_\_\_\_ Phone \_\_\_\_\_

Kentucky Power Electricity Bill Account Number. Example: 000-000-000-0-0

\_\_\_\_\_

Thank you for participating in Kentucky Power's Energy Education for Students Program



Kentucky Power  
**CFL Distribution Program Study**  
**Energy Education For Students**  
**Segment Report**



Thoroughbred Research Group  
1941 Bishop Lane Suite 1017  
Louisville, KY 40218  
[www.torinc.net](http://www.torinc.net)

# Research Methodology

## Project Background

Kentucky Power implemented a program to distribute packages of compact fluorescent lights (CFLs) to residents of their service area by distributing complimentary four-packs of CFLs through local schools. In an effort to estimate the effectiveness of the program and to better understand consumer behavior related to the distribution, Kentucky Power and AEP contracted with Thoroughbred Research Group to conduct a survey among residential customers who received one or more of the four-pack CFLs for use in their homes.

Specific objectives of the research included:

- Document the extent to which the 4-pack CFLs are currently in use in homes
- Determine the types of bulbs the CFLs replaced and the wattage of bulbs replaced (if replacing incandescent bulbs)
- Measure the amount of time the CFLs are in use
- Identify where in the home the CFLs have been installed
- Determine general levels of satisfaction with the CFL distribution program

## Research Methodology

This study consisted of a telephone survey of 121 Kentucky Power customers who had received one or more of the CFL packs through the school outreach program. Kentucky Power supplied Thoroughbred Research with a list of participating customer names and telephone numbers.

Interviews were gathered between May 17 and May 22, 2010. The questionnaire for this study was developed by the staff of AEP and Kentucky Power. Surveys averaged approximately seven minutes to complete.

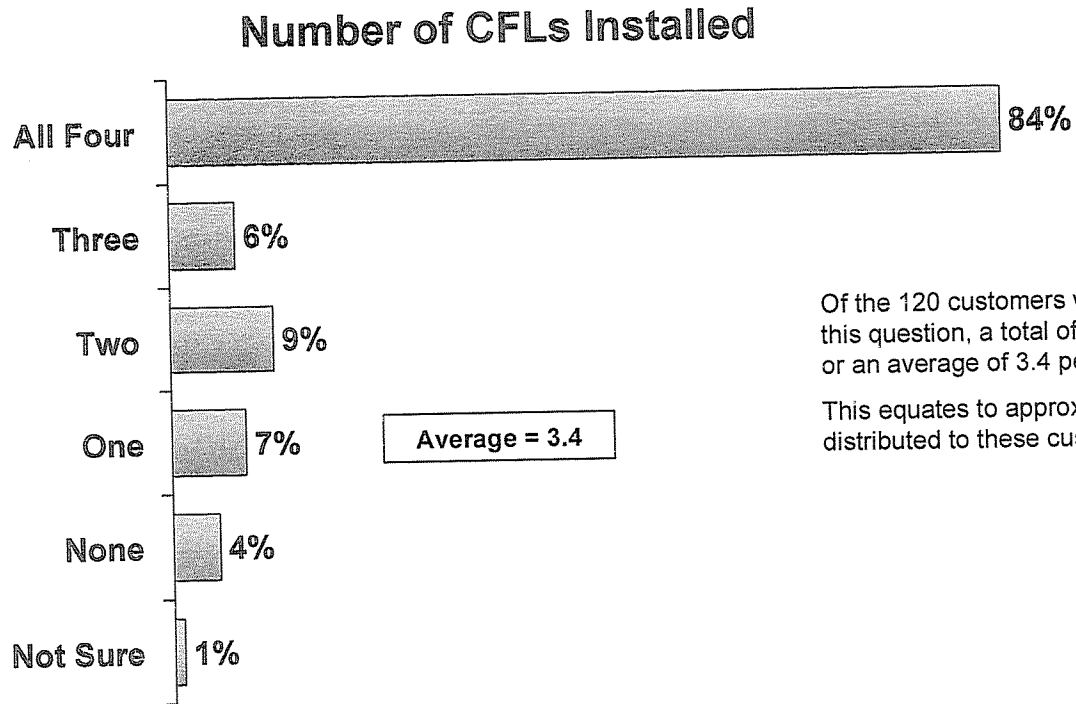
Representing a population of 507 unique customer households, this sample of 121 interviews produces results accurate to within no more than plus or minus 6.5 percentage points at 90% confidence.

# Key Findings

1. Among the 121 respondents in this study, we asked each respondent to detail the experience with the most recent 4-pack of CFLs they received from Kentucky Power (in the event they received more than one package). With descriptions on a total of 484 CFLs (121 x 4), we found that:
  - 331 of the CFLs are currently still in use in the home (68%)
  - 76 were installed but are no longer in use (16%)
  - 77 were never installed (16%)
2. Nearly eight out of ten participants reported having used the CFLs to replace one or more incandescent bulbs. About 71% of the total CFLs distributed replaced an incandescent bulb, with an average wattage of 65 watts.
3. On average, the CFLs distributed through this program that are still in use are operating 4.6 hours per day.
4. Two-thirds of the CFLs still in use are placed in three areas of the home – a bedroom (27%), the kitchen (25%) and the living room (23%).
5. About four in ten program participants said they had already installed CFLs in their home prior to receiving this pack from Kentucky Power. These customers reported having had an average of 6.9 prior CFLs per household.
6. About one in four (27%) said they did not have any CFLs prior to receiving them from Kentucky Power, but had planned to do so; and 24% said they did not have any prior, but had since purchased additional CFLs.
7. Satisfaction with the CFL bulbs received is very high among program participants -- 95% expressed satisfaction with the bulbs they received.
8. Recall of the educational materials included with the package of CFLs was only 46%. Those who recall the materials, however, were generally satisfied (92%).

### Number of CFLs Installed

Nearly three out of four customers reported having installed all of the CFLs they received from Kentucky Power. Only 4% reported they had not yet installed any of the CFLs.



Of the 120 customers who provided an answer to this question, a total of 407 CFLs were installed, or an average of 3.4 per customer.

This equates to approximately 84% of the CFLs distributed to these customers.

Base: All Respondents (n=121)

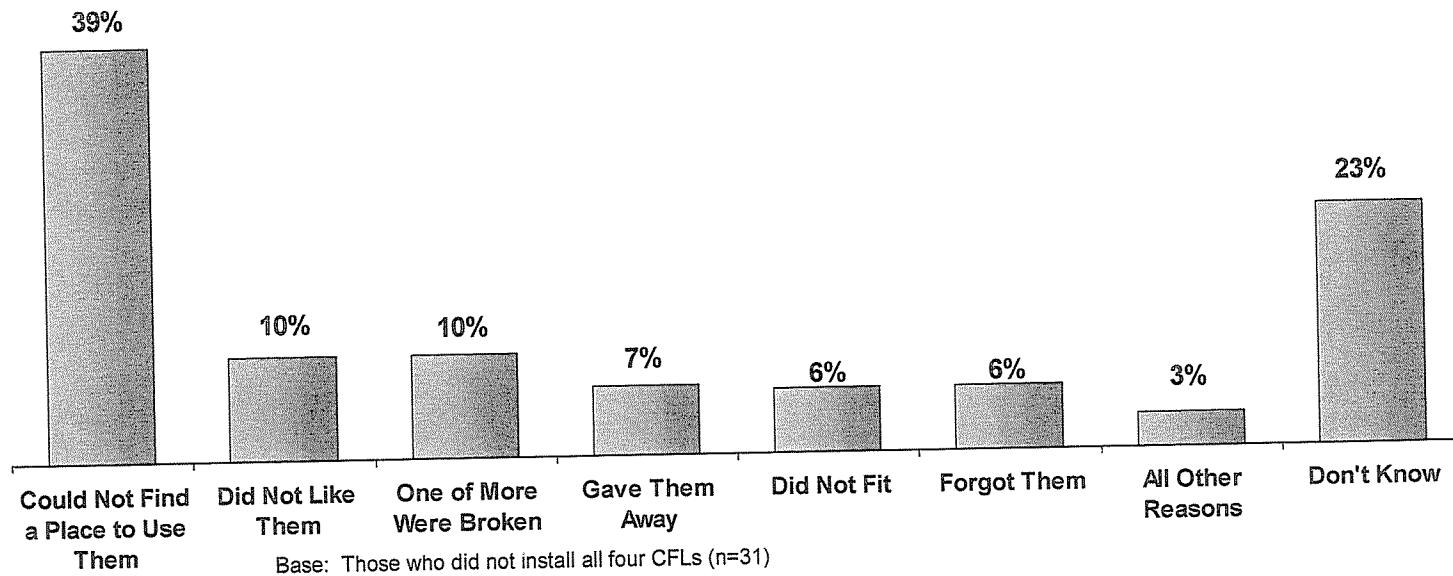
### Reasons for Not Installing All CFLs

The 31 respondents (about 26% of the total sample) who did not install all four of the CFLs they received were asked why they had not used all four bulbs.

The dominant reason was not being able to find a place in the home to use all of the bulbs (mentioned by 39%). Another 10% of this group said they did not like the CFLs, and 10% also reported that one or more of the CFLs they received were broken.

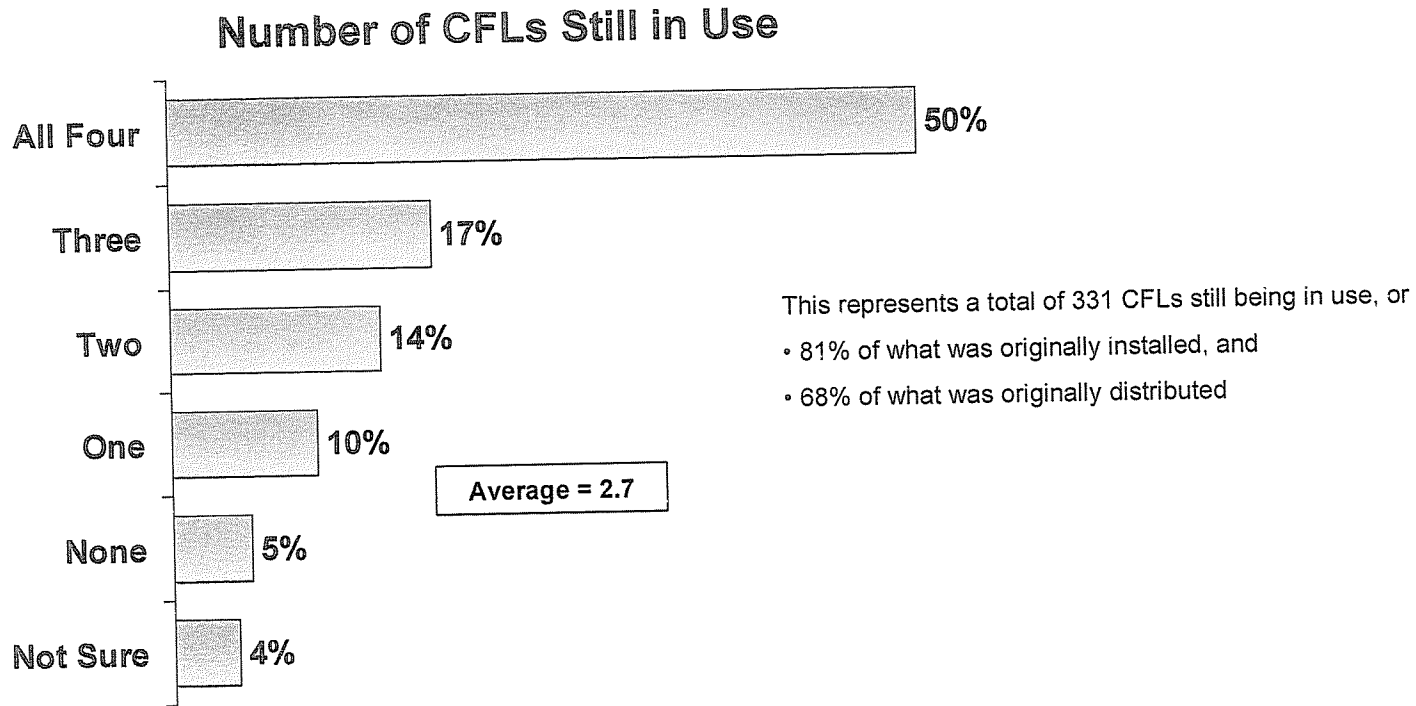
Almost on in four (23%) said they do not know why they have not installed all of the CFLs they received.

### Reasons for Not Installing All CFLs



### Number of CFLs Still in Use

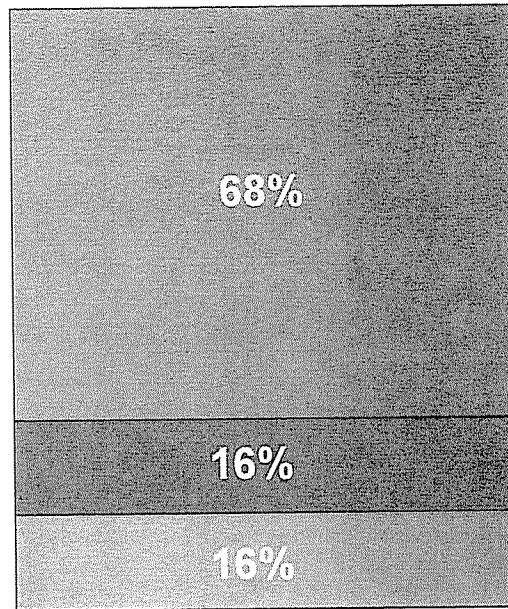
Among those who originally installed at least one of the CFLs they received, half (50%) say all four CFLs are still in use in their homes. Only 5% reported none of the bulbs they had originally installed are still in use.



Base: Those who installed one or more CFLs (n=115)

# Net Distribution, Installation and Use

484 CFL Bulbs  
Distributed



The results of this survey indicate that 68% of the CFLs Kentucky Power distributed through its school outreach program are currently being used in customers' homes.

Still in Use = 331

Installed, No Longer in Use/Not Sure if In Use = 76

Never Installed/Not Sure if Installed = 77

Base: All respondents (n=121)

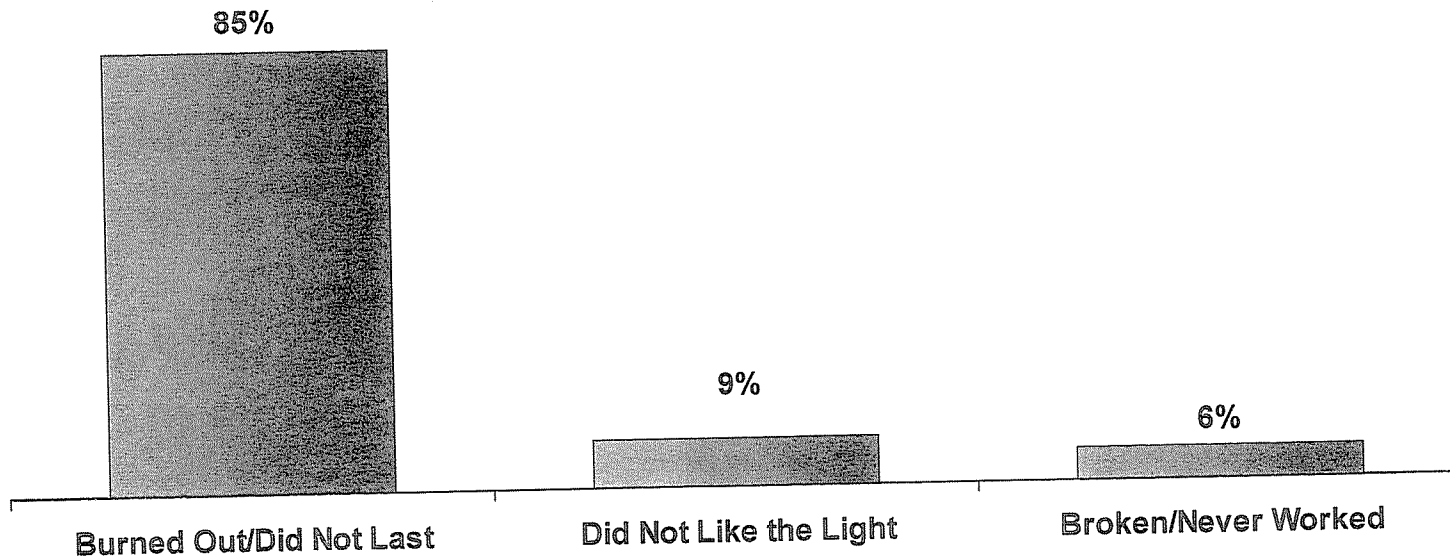


**Reasons for CFLs No Longer in Use**

The 33 respondents who reported that one or more of the CFLs they originally installed are no longer in use in their home, the primary reason is that the bulbs had burned out and no longer work (mentioned by 85% of this group).

Another 9% said they did not like the light the CFL produces, and 6% reported the bulbs were broken or never worked at all.

**Reasons for CFLs No Longer in Use**

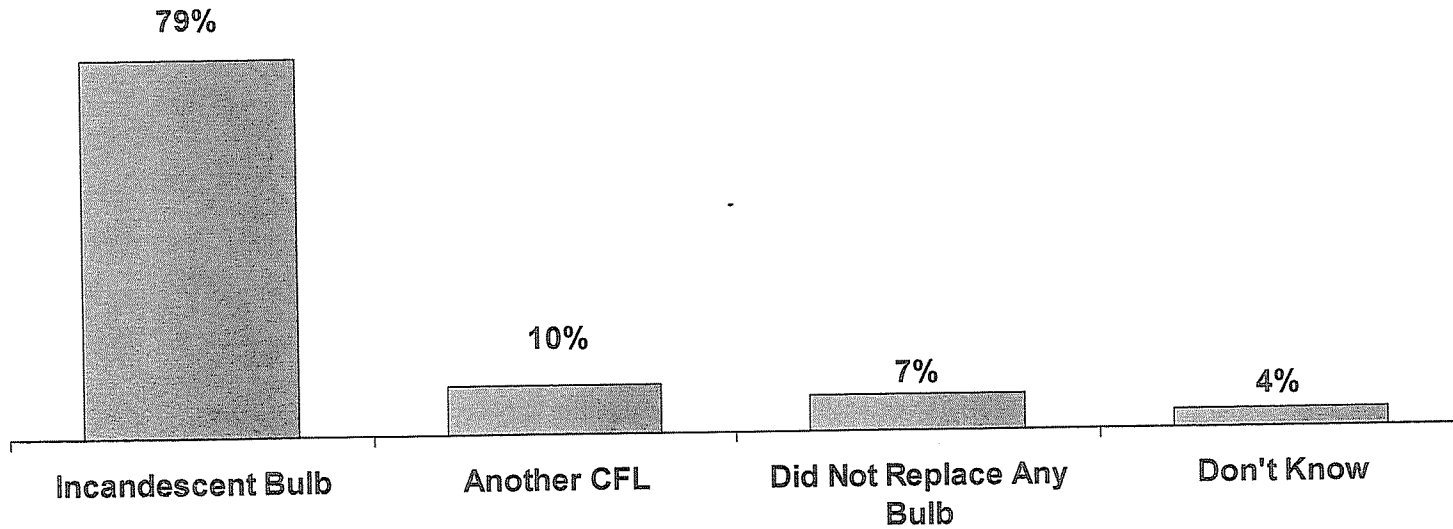


Base: Those who installed one or more CFLs no longer in use (n=33)

**Type of Bulb Replaced**

Nearly eight out of ten reported they used the CFLs they received from Kentucky Power to replace an incandescent light bulb in their home. Ten percent replaced another CFL in the home, and 7% said the bulbs they received did not replace any previous bulbs in the home.

**Type of Bulb Replaced**



Base: Those with one or more installed CFLs still in use (n=109)

**Wattage of Incandescent Bulbs Replaced**

Those who used the CFLs they received from Kentucky Power to replace one or more incandescent bulbs in their homes (86 of the 121 survey participants) were asked to detail the wattage of each bulb replaced. In total, these respondents gave responses for 262 light bulbs.

Excluding "don't know" responses, 51% of the CFLs replaced a 60-watt incandescent bulb, 30% replaced a 75-watt bulb and 9% replaced a 40-watt bulb.

**Wattage of Incandescent Bulbs Replaced**

	Number	Percent of All Responses	Percent of Known Wattage
15 Watt	4	2%	2%
40 Watt	23	9%	9%
60 Watt	125	48%	51%
70 Watt	1	< 0.5%	<0.5%
75 Watt	73	28%	30%
80 Watt	2	1%	1%
100 Watt	17	6%	7%
Don't Know	17	6%	
<b>Total</b>	<b>262</b>	<b>100%</b>	<b>100%</b>

in total, these 262 CFLs replaced a 65-watt incandescent bulb on average.

The 262 bulbs detailed in the table at the left represent 54% of the total CFLs distributed, and 79% of the total CFLs still in use.

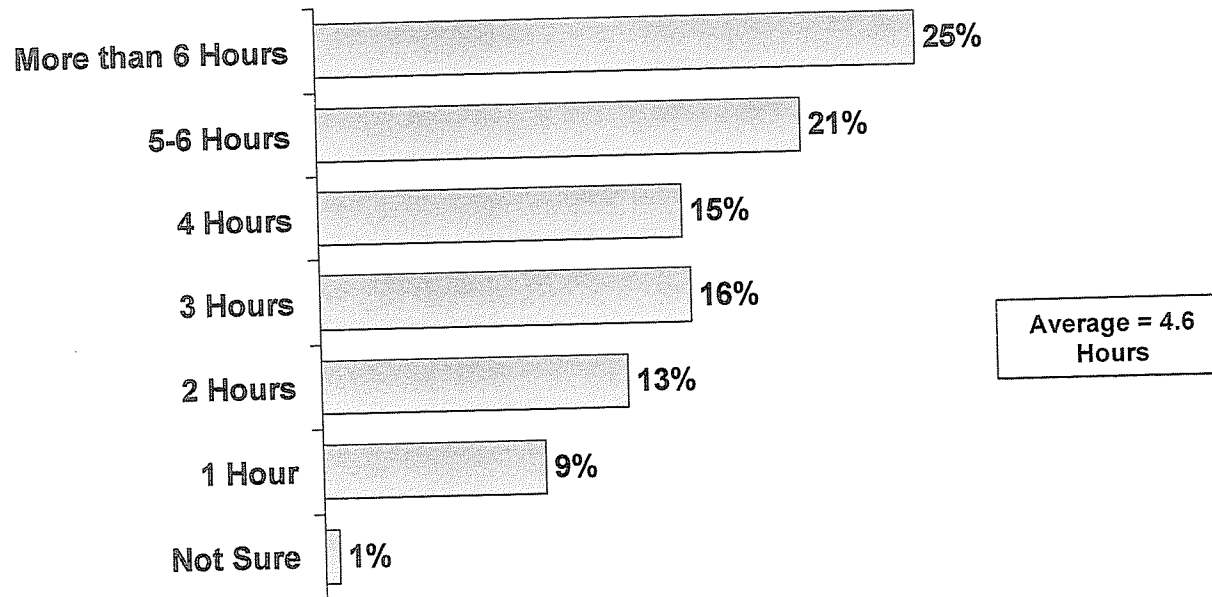
Base: Those who replaced one or more incandescent bulbs with a CFL (n=86)

**Hours in Use**

Respondents with one or more of the CFLs still in use in their home were also asked to how long each bulb is typically used each day in the home.

When aggregating the responses for all 331 CFLs described in this survey, the average daily use was 4.6 hours per CFL still in use.

**Hours CFLs Are in Use**



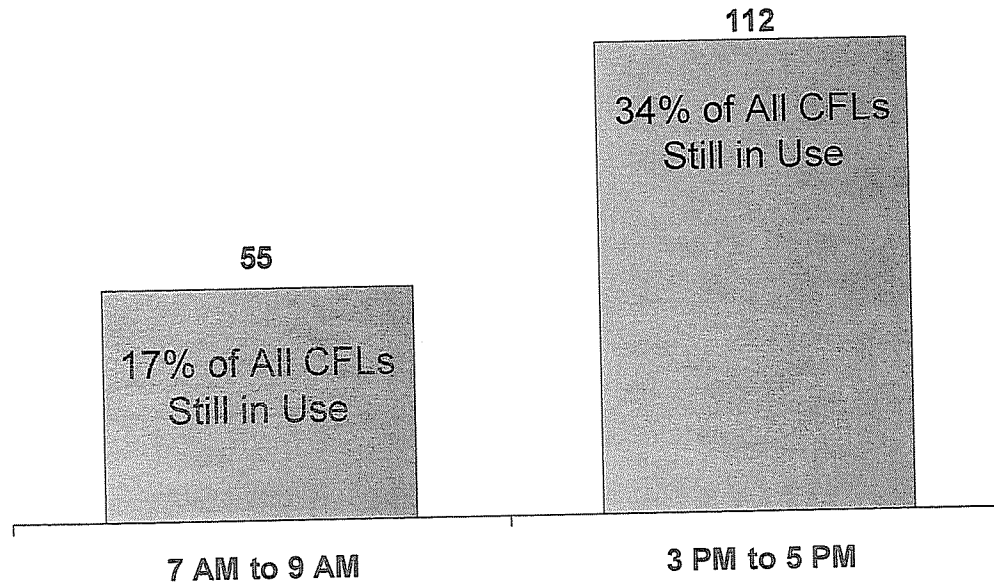
Base: Those with one or more CFLs still in use (n=109)

**Peak Hour Use**

Of the 331 CFLs described in this study, 55 bulbs (or 17%) were reported to be in use during the morning peak period of 7:00 AM through 9:00 AM

Respondents reported 112 bulbs (or 34%) in use for the afternoon peak time period of 3:00 PM through 5:00 PM.

**Bulbs in Use During Peak Times**



Base: Those with one or more CFLs still in use (n=109)

**Placement of CFLs in Home**

Of the 331 CFLs still in use, about two-quarters are used in three areas of the home – a bedroom (27%), the kitchen (25%) and the living room (23%).

**Where in Home CFLs are Used**

	Number	Percent of All Responses	Percent of Known Placements
Bedroom	90	27%	27%
Kitchen	82	25%	25%
Living Room	76	23%	23%
Bathroom	29	9%	9%
Family/TV Room	14	4%	4%
Entry Hall	14	4%	4%
Outside	9	3%	3%
Dining Room	6	2%	2%
Garage/Basement	5	3%	3%
Laundry Room	4	1%	1%
Home Office	1	<0.5%	<0.5%
Don' Know/No Answer	1	<0.5%	
<b>Total</b>	<b>331</b>	<b>100%</b>	<b>100%</b>

75%

Base: Those with one or more CFLs still in use (n=109)

### Experience with Other CFLs in the Home

Fewer than half (41%) reported having had CFLs installed in their home prior to receiving the four-pack from Kentucky Power. Of this group, the average number of previously installed CFLs in the home was 6.9 bulbs.

### Other CFLs in the Home

Other CFLs in Home Prior to Receiving 4-Pack from Kentucky Power	41%
<i>Average Number of Previously Installed CFLs</i>	6.9
No CFLs Prior to Receiving 4-Pack from Kentucky Power	59%
• But were planning on getting CFLs	27%
• Have purchased additional CFLS since	24%

Base: Those with one or more CFLs still in use (n=109)

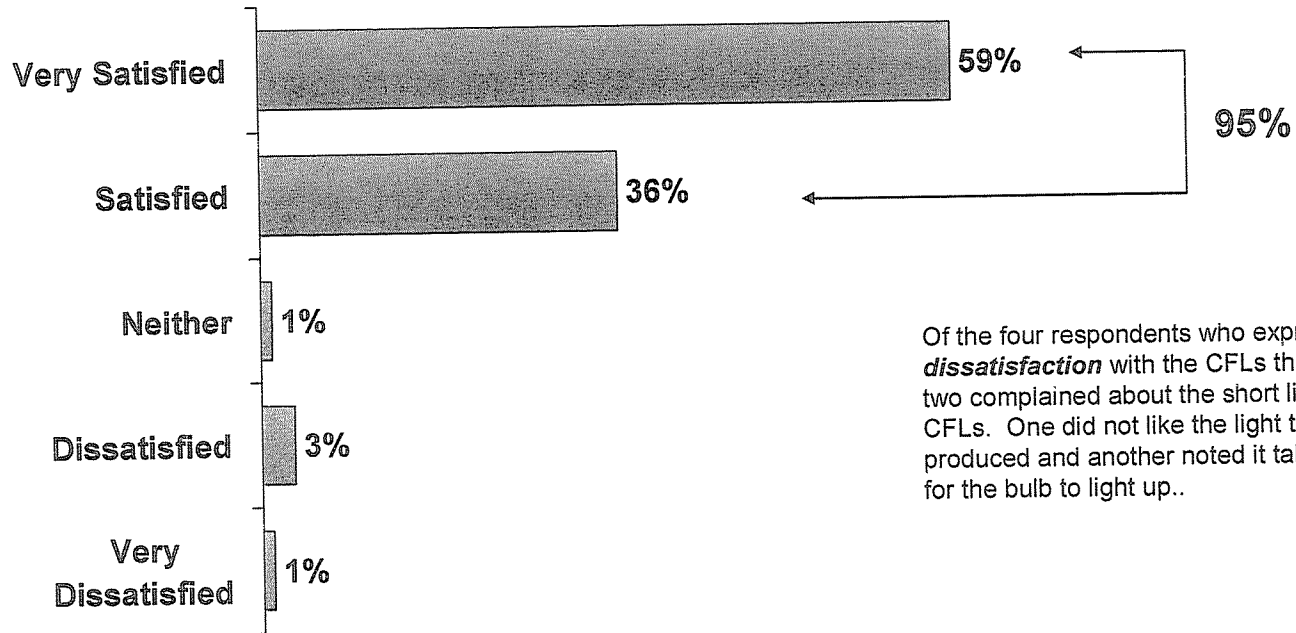
The remaining 59% reported they did not have any CFLs in their home prior to receiving some from Kentucky Power.

A total of 27% said they were planning on buying some, and 24% said they have since bought additional CFLs for their home.

**Satisfaction with CFLs Received**

Satisfaction with the CFL distribution program among participants is very high. Ninety-five percent expressed being satisfied with the CFLs they received from Kentucky Power, with 59% indicating they are “very satisfied”.

**Satisfaction with CFLs from Kentucky Power**



Of the four respondents who expressed **dissatisfaction** with the CFLs they received, two complained about the short life of the CFLs. One did not like the light the CFL produced and another noted it takes too long for the bulb to light up..

Base: Those with one or more CFLs still in use (n=109)



**Verbatim Comments:**

***“Why were you dissatisfied with the CLFs you received from Kentucky Power?”***

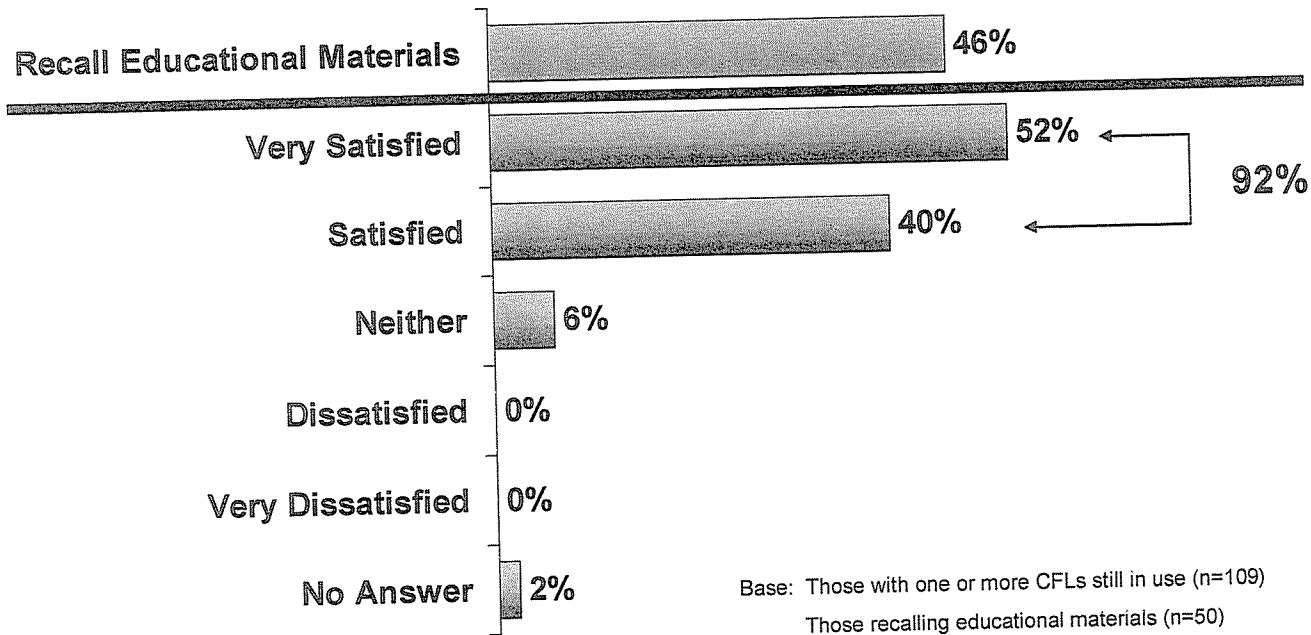
- “I don’t like the light that they put out. They don’t put out that much light.”
- “The light takes too long to light up. That’s it.”
- “They didn’t last long enough and did not put out enough light. That’s it.”
- “They say they have a life span of five years and they only lasted five or six months. That’s all.”

**Overall Satisfaction with Educational Materials**

Fewer than half of those surveys recalled educational materials that were included with the package of CFLs received from their child's school.

Among those who recall the materials, however, 92% expressed satisfaction. The remaining 8% were neutral.

**Satisfaction with Educational Materials**



## Appendix C – Teacher Follow-Up Survey Questionnaire and Results

### Survey Questionnaire with Results:

Good Morning All,

The Kentucky Power Company (KPCo) is in the process of evaluating our 2009 Energy Education for Students Program. KPCo is currently designing a survey that will be sent to a random sample of participants. KPCo is also very interested in obtaining feedback from participating teachers on how effective the NEED workshop was and the materials contained in the manual. Your answers to the brief survey listed below will help KPCo improve the delivery of the program and possibly promote other energy conservation measures through school systems within our service territory.

Thank you in advance for completing the brief questionnaire.

Sincerely,

Don Music  
Kentucky Power Company

Phone: (606) 929 1540  
Fax: (606) 929 1441  
Cell: (606) 922 9954

Survey Questions: Please mark ( x ) one answer only for each question and return your completed questionnaire in this e-mail to Don Music of KPCo.)

1) If you attended the NEED Project workshop in 2009, do you feel this workshop was a valuable educational tool to promote energy conservation measures to teachers, such as the ENERGY STAR® compact fluorescent lights (CFLs)?

**100%** Yes

**0%** No

**0%** I did not attend

2) Do you feel the materials provided in the NEED workshop manual were informational as a teaching tool to educate your students on energy conservation?

**100%** Yes

**0%** No

**0%** Not sure

3) How receptive were your students in understanding the benefits of installing energy conservation measures in their home, such as CFLs?

**40%** very receptive

**60%** somewhat receptive

\_\_\_0%\_ not receptive

4) Did you provide any materials from the NEED workshop manual to your students to take home with them?

\_\_\_100%\_\_ Yes

\_\_\_\_\_ No

Please provide any other comments that you may have that would be helpful to KPCo in promoting the Energy Education For Students Program in the future.

**No Comments Provided** \_\_\_\_\_

**Survey Respondents:** 10 out of a total of 15 teachers responded to the Questionnaire

## Appendix D - Energy and Demand Impact Analysis

### GENERAL INFORMATION:

Number of Participants or Four-Packs of 23 Watt CFLs Provided: 1,130

Number of 23 Watt CFLs Provided:  $4 \times 1,130 =$  4,520

Life of 23 watt ENERGY STAR® CFL: 10,000 Hours

### PARTICIPANT FOLLOW-UP SURVEY RESULTS:

Sample Size: 121 (90% confident level +/- 7.1% error) or 484 CFLs

Percent of CFLs Installed: 84% of the CFLs (407 bulbs) or 3.36 bulbs per participant

Percent of Persistence: 68% of the CFLs still in place (331 bulbs) or 2.7 bulbs per participant;

16% of the CFLs were never installed (77) mainly because no application;

16% of the CFLs were removed (76) due to burning out/did not last (69)

Percent of Free riders: 27%

Weighted Average of Wattage of Incandescent Bulbs Replaced by 23 Watt CFLs: 65 watts

79% of the participants used their CFLs to replace Incandescent bulbs (262 of 331)

10% of the participants replaced another CFL, assuming net change in load

7% of the participants reported no replacements

4% of the participants did not know

Average Daily Hours of Use of the CFL's installed: 4.6 hours per day

Percent of Hours of Use during Peak Hours:

Winter Peak Range Hours (7:00 – 9:00): 17%

Summer Peak Range Hours (15:00 – 17:00): 34%

Placement of CFLs in Home: 27% bedroom; 25% kitchen; 23% living room

**CALCULATION OF ENERGY SAVINGS:**

Average Hourly Energy Savings per bulb (watts):

$$65 \text{ watts (Incandescent bulb replaced)} - 23 \text{ watts (CFL)} = 42 \text{ watt savings per bulb}$$

Average Daily Energy Savings per bulb (watt hours):

$$42 \text{ watts} \times 4.6 \text{ hours/day} = 193.2 \text{ watt hours per bulb}$$

$$\text{Measure Life: } 10,000 \text{ hours} / (4.6 \text{ hours/day} \times 351 \text{ days/year}) = 6.19 \text{ years}$$

Annual Energy Savings per bulb (kWh):

$$193.2 \text{ watts} \times 351 \text{ days/year (assuming 2 weeks vacation)} / 1000 = 67.81 \text{ kWh}$$

Total Annual Energy Savings per Participant (kWh) w/Persistence & Incandescent bulb replacement:

$$4 \text{ bulbs/participant} \times (262 \text{ bulbs}/484 \text{ bulbs}) \times 67.81 \text{ kWh/bulb} = 146.83 \text{ kWh/participant}$$

Total Program Annual Energy Savings (kWh) w/Persistence & Incandescent bulb replacement:

$$\text{By Bulbs: } (262 \text{ bulbs}/484 \text{ bulbs}) \times 4,520 \text{ bulbs} \times 67.81 \text{ kWh/bulb} = 165,916 \text{ kWh}$$

$$\text{By Participant: } 1,130 \text{ Participants} \times 146.838 \text{ kWh/participant} = 165,916 \text{ kWh}$$

Net Program Energy Savings (kWh) w/Free riders:

$$165,916 \text{ kWh} \times (1.0 - .27) = 121,119 \text{ kWh}$$

Net Program Energy Savings (kWh) with 8.7% T&D Losses:

$$121,119 \text{ kWh}/1000 \times 1.087 = 131.66 \text{ MWh}$$

**CALCULATIONS OF DEMAND REDUCTION:**

Peak Winter Demand Reduction per Participant (Watts) w/Persistence & Incandescent replacement:

$$42 \text{ watts} \times (262 \text{ bulbs}/484 \text{ bulbs}) \times 4 \text{ bulbs/participant} \times .17 \text{ CF} = 15.46 \text{ watts/participant}$$

Total Program Net Winter Peak Demand Reduction (kW) w/Free riders:

$$15.46 \text{ watts/participant} \times 1,130 \text{ participants} \times (1.0 - .27) = 12,753 \text{ watts}/1000 = 12.753 \text{ kW}$$

Total Program Net Winter Peak Demand Reduction (kW) with 10.8% T&D Losses:

$$12.753 \text{ kW} \times 1.108 = 14.13 \text{ kW}$$

Peak Summer Demand Reduction per Participant (Watts) w/Persistence & Incandescent replacement:

$$42 \text{ watts} \times (262 \text{ bulbs}/484 \text{ bulbs}) \times 4 \text{ bulbs/participant} \times .34 \text{ CF} = 30.92 \text{ watts/participant}$$

Total Program Net Summer Peak Demand Reduction (kW) w/Free riders:

$$30.92 \text{ watts/participant} \times 1,130 \text{ participants} \times (1.0 - .27) = 25,506 \text{ watts}/1000 = 25.506 \text{ kW}$$

Total Program Net Summer Peak Demand Reduction (kW) with 10.8% T&D Losses:

$$25.506 \text{ kW} \times 1.108 = 28.26 \text{ kW}.$$





EVALUATION REPORT

for the

*COMMUNITY OUTREACH  
COMPACT FLUORESCENT LIGHTING  
PROGRAM*

in

Kentucky Power Company

Program Period: January 2009 - December 2009

Load Research Analysis  
American Electric Power Service Corporation

August, 2010

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## I. EXECUTIVE SUMMARY

This report provides the results of the process, market, and impact evaluations for the first year of Kentucky Power Company's Community Outreach Compact Fluorescent Lighting (CFL) Program (Program) in 2009. It also provides a benefit/cost analysis which utilizes the first year results to provide a prospective view for continuing the Program. The Program evaluations were based on engineering estimates, vendor supplied data, and specific information obtained from a participant follow-up survey conducted in May, 2010.

The Program was developed with the assistance of the Kentucky Power Company (KPCo) Demand-Side Management Collaborative (Collaborative) and was approved by the Public Service Commission (PSC) on February 24, 2009 (Case No. 2008-00349). The objective of the program was to promote the conservation and efficient use of electricity by encouraging the use of energy efficient ENERGY STAR® compact fluorescent light bulbs (CFLs) in place of standard efficiency incandescent light bulbs. The Program was made available to KPCo customers in selected communities within the KPCo service territory. The major goals of the Program were: provide education to customers as to the proper application of high efficiency CFLs; encourage the use of energy efficient lighting in their homes; reduce customer usage of electric energy; increase customer services & satisfaction, and reduce KPCo's peak demand.

KPCo implemented the Program by targeting selected communities within their service territory and promoted the Program through advertising and community outreach activities using local radio stations and newspapers. A package of four ENERGY STAR® CFLs, along with education material, was provided to qualified customers at the selected community events.

A participant follow-up survey was conducted by Thoroughbred Research Group during May 2010 using a randomly selected sample of Program participants. The survey results showed high

levels of satisfaction among the participants who received CFLs from the Program. Approximately 97% of the program participants surveyed said they were “very satisfied” or “satisfied” with the CFLs and with the CFL Program. The survey also indicated approximately 27% of program participants were free riders who would have purchased and installed CFLs in their homes had the program not been in place.

For the 2009 Program, a total of 3,744 participants received a four-pack of CFLs resulting in 14,976 CFLs distributed to the selected communities. The results of the evaluation showed the Program to be cost-effective based on the Total Resource Cost (TRC) and Utility Cost (UC) economic tests. The Participant Cost (PC) economic test was not applicable as the participants incurred no direct costs. The Program’s total net annual energy savings were estimated at 538.9 Megawatt-Hours (MWh) -- including transmission losses, distribution losses, and free riders -- based on the 3,744 actual participants for 2009. The total net demand reduction was estimated to be 94 kilowatts (kW) in the winter and 101 kW in the summer -- including Transmission and Distribution Loss Savings and free riders.

## II. TECHNOLOGY DESCRIPTION

Kentucky Power's Community Outreach CFL Program was developed to promote conservation and the efficient use of electricity by encouraging the use of high efficiency lighting by replacing standard efficiency incandescent bulbs with CFLs. Both incandescent lamps and CFLs consist of two parts: the base and the bulb. Both types of lighting are similar in that the base provides the electric current to the bulb where it excites the elements that give off visible light. However, a CFL uses less electricity to produce the same amount of light output (lumens), as an incandescent lamp thereby reducing the energy consumption and demand.

The CFLs produce light differently than incandescent bulbs. For an incandescent bulb, the electric current continues through a wire filament and heats the filament until it starts to glow. For a CFL, a ballast is contained within the base, which supplies or "kick starts" an electric current through a glass tube containing argon and a small amount of mercury vapor. The electric current generates an invisible ultraviolet light that excites a fluorescent coating (phosphor) on the inside of the glass tube, which emits visible light. All ENERGY STAR® qualified CFLs use electronic ballasts, rather than the original large and heavy magnetic ballasts that caused a buzzing noise in some bulbs.

CFLs require a little more energy when first turned on, but once the electric current starts moving through the glass tube, they use about 75% less energy than incandescent bulbs, with a life expectancy about ten times greater. At current market prices the equipment savings due to the longer life covers the initial incremental cost of purchasing the more efficient CFL versus an incandescent bulb.

The estimated energy and demand savings are calculated by comparing the wattage of the incandescent bulb with the wattage of a CFL of equivalent lumens. For example, a 75-watt

incandescent bulb can be replaced with a 23-watt CFL of equal lumens, resulting in an hourly energy savings of 52-watts.

Today's generations of CFLs are more adaptable for residential lighting uses. Their small physical size, along with their instantaneous start, dimness capacity, and outdoor use allows for more applications in a residential structure. Additionally, there are certain ENERGY STAR® qualified CFLs that are designed to be used on dimmers and three-way switches. This information is included in customer education and promotion components of KPCo's Program are included to ensure that CFLs gain more acceptance among KPCo customers.

### **III. PROGRAM DESCRIPTION**

#### Program Overview:

The Community Outreach CFL Program was designed as both an education program and a program to increase the adoption of energy efficient lighting in residential homes. KPCo worked in selected communities to provide education materials to KPCo customers and a package of four (4) ENERGY STAR® qualified CFLs. This provided participating KPCo customers with a better understanding of the purpose and benefits of installing energy efficient CFLs in their homes and increased their awareness of the capabilities and direct savings of CFLs.

#### Rationale for the Program:

The lower wattage of CFLs versus the higher wattage of incandescent bulbs to attain the same level of lumens reduces energy consumption, which in-turn lowers the customer's monthly electric bill, and provides both energy and demand savings to KPCo. Additionally, the life of the high-efficiency CFLs exceeds that of the incandescent lamps by about a factor of ten, thus reducing equipment costs and adding another benefit of using this energy conservation measure in a customer's home. Although, today's higher purchase price could still be considered somewhat of a barrier which prevents customers from purchasing a CFL versus an incandescent bulb, this barrier is less overwhelming than in previous years, and can be overcome with additional education regarding the financial benefits of CFLs. Historically, CFLs were limited to specific home lighting applications, but improving CFL technology has created more applications for the use of CFLs.

Despite the increased availability and applicability of CFLs, there are still significant numbers of customers in their service territory that are not aware of the many benefits that CFLs provide. KPCo believes that education related to the improved technology of energy efficient products, such as CFLs, can have a significant benefit if targeted to communities within its service

territory. This Program provides an effective and direct avenue to reach customers via the direct distribution of energy efficiency CFLs in selected communities.

Program Promotion:

The KPCo staff advertised through local radio and newspaper ads to six selected communities within KPCo's service territory. Specific radio and newspaper ads for these communities introduced the Program and announced the time, day, and location where KPCo staff would provide educational materials and ENERGY STAR® qualified CFLs to KPCo customers. A sample newspaper ad used is shown in Exhibit 1 and copies of the educational materials provided to the participants are shown in Exhibits 2 and 3. Participants of the Program were required to provide a copy of their KPCo electric bill and/or their name, address and telephone number to qualify for the educational materials and a four-pack of the ENERGY STAR® qualified CFLs.

Program Implementation:

KPCo staff scheduled the time and place within a selected community to be used for the distribution of the education materials and CFLs to the qualified KPCo customers. Once this was finalized, KPCo contacted local radio stations and newspapers serving the selected community to introduce the Program and announce the time and location for qualified customers to receive the educational materials and CFLs.

At the time of the distribution of the education materials and CFLs, KPCo staff required each participant to provide a copy of their electric bill and/or their name, address and telephone number to verify they were a KPCo customer. The customer information was input into a spreadsheet on-site. KPCo utilized this information to tabulate the number of CFLs provided to qualified KPCo customers, the county from where the customer traveled, and to conduct a follow-up survey to collect additional information from the participant for the measurement and verification of the installation of the CFLs for the impact and process evaluations. Providing the CFLs directly to the



customer allowed KPCo to collect specific information for each participant, to provide education materials that explained the benefits for installing CFLs in the participant's home, and address any questions that the participant had on the CFLs or other energy efficiency measures.

#### IV. DATA COLLECTION

Various aspects of the Program needed to be evaluated in order to determine the Program's overall cost effectiveness, including market potential and penetration, customer satisfaction, persistence of the energy savings, free ridership, and the net load impacts. In order to perform the Program analysis, information was collected from the data compiled by the KPCo staff and from a participant follow-up survey that was conducted in May, 2010.

The data collected included the customer's name, account number, telephone number, the number of CFLs provided to the customer and the county where the customer resides. KPCo staff provided a spreadsheet to record the information from the participants in the Program. This information provided enough data to perform the necessary follow-up survey to collect additional information that was used to perform the Program process, market and impact evaluations.

The participant follow-up survey was designed to collect, from a randomly selected sample of participants, the information necessary to perform the program impact evaluation and the process and market evaluations. The survey was conducted using a telemarketing process. For the sample selection, the original list of 3,744 participants was reduced to 2,589 due to missing or incorrect phone numbers and/or duplicate or now inactive customer account numbers. The information collected for the impact evaluation included the number of CFLs actually installed in the participant's home, the size (wattage) of the incandescent bulbs replaced, whether the installed CFLs were still in place, an estimate of how many hours and time of day they are normally operating and the locations in the home at which the CFLs were installed. The information collected for the process and market evaluations included whether the participants were already installing CFLs in their homes, whether they would have purchased CFLs in lieu of the Program, their satisfaction with the Program, and the use of the CFLs in their homes.

Thoroughbred Research Group was hired to conduct a telemarketing survey for 255 Program participants to provide results at a 90% confidence level with +/- 5% error. The questionnaire and results of the telemarketing participant survey are included in Appendix A.

## V. PROCESS AND MARKET EVALUATION

The program's implementation during 2009 consisted of securing Program participants through community outreach activities conducted at selected communities within the KPCo service territory. In order to promote CFLs to its residential customers, KPCo utilized local advertising media in selected communities and scheduled the distribution of education materials and CFLs to qualified customers at community facilities. This provided a direct avenue to educate KPCo's customers regarding the benefits and savings available by using CFLs and also provided a low cost program to promote energy efficient CFLs to KPCo customers. The incentive to the participant was that they received education materials, a four-pack of ENERGY STAR® qualified CFLs, and potential energy savings resulting in savings with their electric bill.

### Process Analysis:

The process analysis of the Program utilized recruitment tracking data from the spreadsheet provided by the KPCo staff and the results of the participant follow-up survey to evaluate the delivery mechanism, promotional effectiveness, and customer satisfaction.

**Delivery Mechanism:** KPCo utilized community outreach activities to administer the Program to deliver educational materials and to provide a four-pack of ENERGY STAR® qualified CFLs to each qualified customer. The delivery mechanism was effective in that only KPCo customers received the program benefits and a face-to-face opportunity was provided for customers to ask questions of KPCo staff. The mechanism was also effective because KPCo reached the customer participation goal in a cost-effective manner and provided excellent customer satisfaction ratings.

Promotional Effectiveness: The promotional materials, local radio and newspaper ads, were considered effective because the response produced 3,744 participants, greater than the 2009 participant goal of 3,500, for a 107% sign-up result.

Customer Satisfaction: As participants indicated in the participant follow-up survey, their overall satisfaction with the Program was very high, with 97% of the respondents being “very satisfied” (61%) or “satisfied” (36%) with receiving the energy efficient CFLs and also 97% of the respondents were “very satisfied” (68%) or “satisfied” (29%) with the Program overall. Only 1% of the respondents surveyed expressed dissatisfaction with the CFLs and the Program, stating reasons such as the CFLs had a shorter life than expected, the light output was inadequate, or that they received an insufficient quantity of CFLs. The survey results also indicated that 7% of the respondents removed their CFLs from their home, mainly due to lamp failure, while another 15% of the respondents never installed their CFLs because they did not believe they had an appropriate location to place them in their home.

#### Market Analysis:

In the analysis of the marketing of the Program, the product awareness, free ridership, spillover, and market potential were examined. Results from the participant follow-up survey and from the AEP 2009 Residential Appliance Saturation Survey for KPCo were utilized to perform the market analysis.

Product Awareness: The Participants’ pre-program awareness of energy efficient CFLs was split with 47% of the participants surveyed having used CFLs in their home prior to the Program, and 53% of the participants surveyed having not previously used CFLs in their home.

Free riders: A free rider is a participant who utilized the provided CFLs, but would have purchased and installed equivalent CFLs had they not participated in the Program. From the survey responses, 27% of participants were identified as likely free riders in this program. Only those

participants who originally did not have CFLs in their homes (53%) were asked if they had planned to purchase CFLs for their home. Of those participants, 27% indicated they had planned to purchase some CFLs. However, 22% purchased additional CFLs since participating in the Program, and these additional purchases provided a potential spillover effect, providing additional energy savings. The remaining participants (47%) who had CFLs in their homes prior to the program were not asked the question to determine if they were free riders or if they provided spillover. Although the survey did not capture the total free riders or spillover for all participating customers, the available 27% free rider response was used for the entire participant group, and, to stay conservative in impact analysis, the spillover effects were ignored.

Market Potential: Based on the responses to the 2010 Residential Appliance Saturation Survey, it was determined that 13% to 25% of rooms in KPCo customer's homes utilize some CFLs as a source of lighting. The top three locations in the home where CFLs were the main source of lighting were the kitchen, living room and master bedroom, respectively. For all the locations in the home it can be said that three to six times more customers are still using incandescent bulbs for their main source of lighting. Therefore, there continues to be a significant market opportunity to promote energy efficient CFLs in the KPCo service territory.

## VI. IMPACT EVALUATION

Findings:

Based on the first year (2009) of the three-year Program, with 3,744 participants, the net total Program annual energy savings was calculated to be 538.9 MWh (which includes Transmission and Distribution loss savings, persistence and free riders). On average, each participant experienced an annual energy savings of approximately 181 kWh at the meter (excluding free riders). The net total Program demand reduction was 94 kW in winter and 101 kW in summer (including Transmission and Distribution loss savings, persistence and free riders). These impacts resulted in demand reductions per participant of 31 watts (W) and 33 W at the meter in winter and summer, respectively (excluding free riders). Table-1 summarizes the entire Program load impacts.

**Table-1: Average Load Impacts for Program**

Average Load Impacts	2009 Community Outreach CFL Program
Annual Energy Savings/Participant	181.4 kWh
Winter Peak Demand Reduction/Participant	31 W
Summer Peak Demand Reduction/Participant	33 W
Net Total Program Energy Savings <sup>(1)</sup>	538.9 MWh
Net Total Program Winter Demand Reduction <sup>(2)</sup>	93.9 kW
Net Total Program Summer Demand Reduction <sup>(2)</sup>	100.8 kW

<sup>(1)</sup>Includes 8.7% T&D Losses

<sup>(2)</sup>Includes 10.8% T&D Losses

### Energy Impact Analysis:

The average energy savings per bulb distributed to customers was calculated by multiplying the average number of hours in use by the difference between each 23-watt CFL installed and operating and the wattage of the incandescent bulb replaced. The participant follow-up survey conducted on a random sample of program participants provided the number of CFLs installed in each participant's home, the average wattage of the incandescent bulbs replaced in a participant's home, the typical daily use of each CFL installed (in hours) and, the time of day when their bulbs would normally be operating. The typical daily use of the CFLs per participant was multiplied by 351 days per year (assuming 2 weeks vacation per year) to arrive at the estimated annual usage per participant. The estimated energy savings per participant was multiplied by the number of participants to arrive at the total program annual energy savings. The net Program energy savings were calculated by incorporating the modeled effects of free riders and transmission & distribution loss savings. No additional energy was credited to the possible spillover effects. Appendix B gives the details of the Energy Impact Analysis based on engineering estimates and the results of the participant follow-up survey.

### Demand Impact Analysis:

The peak demand reduction per participant was determined by the results of the participant follow-up survey. The participant follow-up survey indicated the percent of participants that normally operated their CFLs during the time of peak hours. The percent normally operating during peak hours provided coincidence factors for winter and summer. The coincidence factors for the winter and summer were multiplied by the participant's average hourly demand reduction to arrive at the coincident peak demand reduction per participant at the time of winter and summer peaks. The total Program net coincident peaks for winter and summer were determined by applying the seasonal



coincident peak demand reductions per participant to the number of participants, which included the affect of free riders and transmission and distribution losses. Appendix B gives the details of the Demand Impact Analysis.

## VII. COST-BENEFIT EVALUATION

### Results:

Cost-benefit analyses of DSM programs may be performed using either an historical basis or a prospective basis. From an historical basis, actual costs and load impacts for DSM programs participants during an historical period (such as the first year of a program) are utilized to assess the net benefits. The net benefits are calculated over the expected life of the installed measures and may be calculated over as much as a 20-year period for the first year's participants. These are after-the-fact analyses which are normally utilized to determine the cost-effectiveness and cost recovery of historical activity, but may not be representative of the future, and therefore, may not be the best basis for future DSM program decision making.

Cost-benefit analyses from a prospective basis anticipate future DSM program participation, costs and impacts. These analyses expand upon actual field experience (cost, impact, etc.) to estimate the net benefit from projected implementation in the future. The foundation of DSM program knowledge serves as a basis to estimate projected costs, impacts, etc. This is the real value of field experience: applying what has been learned to guide decisions on future DSM program implementation. Cost-benefit analyses were performed on the Program with the existing measures of ENERGY STAR® qualified CFLs.

On a prospective basis the Program is found to be cost effective under the Total Resource Cost and the Utility Cost tests, not cost-effective from a RIM test perspective, and the Participant Cost test not being applicable, since there were no participant costs. Projecting continued implementation of the Program through 2011 yields the following economic test results in Table-2.

**Table-2: Economic Test Results**

<b>B-C Ratio</b>	<b>Economic Test</b>
3.13	Total Resource Test
0.44	Rate Impact Measure
2.37	Utility Cost
NA	Participant

Assumptions:

The cost-benefit analysis was performed using projected program costs based on the actual program costs realized in the first year of the Program. Based on the first year of the three year Program with a total of 3,744 participants, the total Program costs were \$43,934, including the evaluation costs and participant follow-up survey costs, which occurred in 2010. The total Program costs also included the promotional costs and the cost of the compact fluorescent bulbs. Breakdowns of actual 2009 program costs are outlined in Table-3.

**Table-3: Actual Program Costs**

<b>Item</b>	<b>2009/2010*</b>
Compact Fluorescent Lights	\$27,457
Promotion	\$6,662.
Follow-Up Survey	\$7,335*
Program Evaluation	\$2,480*
<b>Total Program Cost</b>	<b>\$43,934</b>

\*2010 costs refer to follow-up survey and evaluation costs only.

The anticipated Program costs for future implementation are shown below in Table-4, based on 4,000 participants proposed for each year of 2010 and 2011.

**Table-4: Projected Program Costs**

<b>Item</b>	<b>2010</b>	<b>2011</b>
Compact Fluorescent Bulbs	\$40,000	\$40,000
Promotion	\$3,900	\$4,000
Follow-Up Survey	\$0	\$7,800
Program Evaluation	\$0	\$2,500
<b>Total Program Cost</b>	<b>\$43,900</b>	<b>\$54,300</b>

Additional measure/program characteristics based on the three-years of the program and assumed for the cost-benefit analysis are:

- A. Life of the compact fluorescent bulbs assumed at 6.3 years, with no replacement.
- B. Impacts of the CFLs were reduced to 60% after 2012 due to new government lighting standards.
- C. 27% Free riders and 78% Persistence
- D. Compact Fluorescent Bulbs (4-Pack of 23 watt CFLs): \$ 10 per 4-Pack
- E. Evaluation costs set at \$2,500
- F. Follow-up survey costs @ \$7,800
- G. Includes T&D loss savings of 8.7% for energy and 10.8% for demand

The assumed load impacts are described in Appendix B.

# FREE CFLs

Kentucky Power will be distributing energy efficient, compact fluorescent light bulbs (CFLs) to customers **Wed., June 17, at our Hazard Service Building** (address below). The **FREE** CFLs will be available on a first-come, first-served basis while supplies last.



CFLs are a great choice to light your home. They can last up to 10 times longer than incandescent bulbs and typically use 1/4 - 1/3 less electricity. They also produce 80 percent less heat, yet provide more light. All this means they can save you money, particularly when they are **FREE** to Kentucky Power customers.

To get your **FREE CFL**<sup>\*</sup>, simply bring a copy of your AEP/Kentucky Power electricity bill (so we can verify you are a Kentucky Power customer) and receive your bulb.

**This promotion is for AEP/Kentucky Power customers only.**



## **CFL GIVEAWAY**

**9 a.m. - 3 p.m.<sup>\*</sup>**

**Wed., June 17, 2009**

**Kentucky Power Service Bldg.**

**1400 East Main Street**

**Hazard, KY**

<sup>\*</sup> While supplies last. Kentucky Power reserves the right to limit the number of CFLs provided to each customer.

Exhibit 2 – Some Facts About CFL

*Some facts about* **CFL** *Compact Fluorescent Lighting*

Compact fluorescent light bulbs (CFLs) are a great way to save energy and money in your home. Designed to directly replace incandescent bulbs, they offer the best features of fluorescent lighting – longer life, lower operating costs and less heat gain – with the ease and convenience of traditional lighting. Consider the following:

☐ CFLs can last up to 10 times longer than incandescent bulbs. This means you won't have to change light bulbs nearly as often. While you may pay more up front for a CFL bulb (and they get cheaper every day), you will only have to replace it every 8 - 10 years.

☐ CFLs typically use 1/4 to 1/3 less energy than traditional light bulbs. For example, a 28-watt compact fluorescent typically provides as much light as a 100-watt incandescent bulb. This means you will save money on your monthly electric bill.

☐ CFLs produce about 80 percent less heat, yet provide more light. Less heat makes them easier to work around and helps reduce summer air-conditioning costs.

☐ CFLs are environmentally friendly. According to Energy Star (a joint program of the United States Environmental Protection Agency and the Department of Energy) every compact fluorescent light can prevent more than 450 pounds of emissions from a power plant over its life.

☐ CFLs can save you money. While the initial cost of a compact fluorescent light bulb will be higher than a comparable incandescent bulb, savings will be realized due to the lower wattage of the bulb and the longer life. Want to know how much you can save? Visit our web site at [kentuckypower.com](http://kentuckypower.com) and utilize our Online Energy Calculator function. There you will discover how much CFLs can save you on your electric bill. You will also learn about other steps you can take to conserve electricity and lower your energy costs.

LIGHT OUTPUT EQUIVALENCY

Incandescent Wattage	Approximate CFL Wattage	Equivalent Incandescent Bulbs
40	450	9-13
60	800	13-15
75	1,100	18-25
100	1,600	23-30
150	2,600	30-67

**COMPARE & SAVE**

28-watt CFL bulb	Equivalent To	100-watt incandescent bulb
Purchase price = \$3.22		Purchase price = \$.99
Light output = 1600 lumens		Light output = 1600 lumens
Expected Life = 8000 hours		Expected Life = 750 hours
*Life Cycle Cost = \$17.76		*Life Cycle Cost = \$67.80

\*For comparison purposes, based on 8,000 hr life cycle. Energy costs based on \$.07 per kWh.



[www.kentuckypower.com](http://www.kentuckypower.com)  
(800) 872-1113

## Exhibit 3 –FACT SHEET: Mercury in CFLs

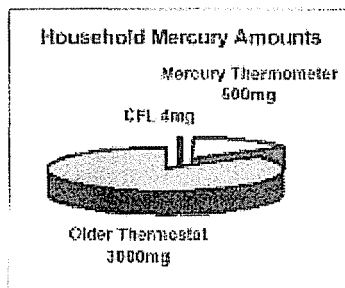
### FACT SHEET: Mercury in Compact Fluorescent Lamps (CFLs)

The US Environmental Protection Agency has prepared this fact sheet to respond to questions/ concerns about mercury in energy-efficient lighting that uses compact fluorescent technology.

#### What are the Health Risks of Mercury and How do CFLs Fit In?

Mercury is an essential ingredient for most energy-efficient lamps. The amount of mercury in a CFL's glass tubing is small, about 4mg. However, every product containing mercury should be handled with care. Exposure to mercury, a toxic metal, can affect our brain, spinal cord, kidneys and liver, causing symptoms such as trembling hands, memory loss, and difficulty moving.

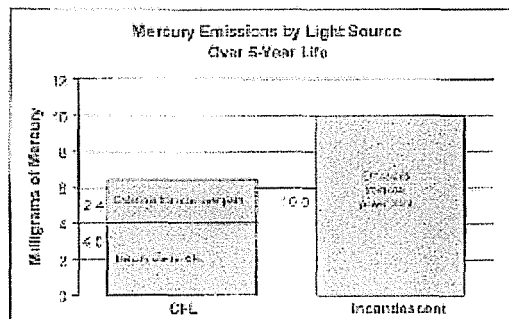
As energy-efficient lighting becomes more popular, it is important that we dispose of the products safely and responsibly. Mercury is released into our environment when products with mercury are broken, disposed of improperly, or incinerated. If you break a CFL, clean it up safely. And always dispose of it properly to keep CFLs working for the environment.



Mercury is an ingredient in several household products. Recycling programs exist for mercury in older non-digital thermostats and mercury thermometers, but residential CFL recycling programs are just now appearing.

#### CFLs Responsible for Less Mercury than Incandescent Light Bulbs

Ironically, CFLs present an opportunity to prevent mercury from entering our air, where it most affects our health. The highest source of mercury in our air comes from burning fossil fuels such as coal, the most common fuel used in the U.S. to produce electricity. A CFL uses 75% less energy than an incandescent light bulb and lasts at least 6 times longer. A power plant will emit 10mg of mercury to produce the electricity to run an incandescent bulb compared to only 2.4mg of mercury to run a CFL for the same time.



Source: US EPA, June 2002

#### Always Dispose of Your CFL Properly

While CFLs for your home are not legally considered hazardous waste according to federal solid waste rules, it is still best for the environment to dispose of your CFL properly upon burnout. Only large commercial users of tubular fluorescent lamps are required to recycle. If recycling is not an option in your area (see below on how to find out), place the CFL in a sealed plastic bag and dispose the same way you would batteries, oil-based paint and motor oil at your local Household Hazardous Waste (HHW) Collection Site. If your local HHW Collection Site cannot accept CFLs (check Earth911.org to find out), seal the CFL in a plastic bag and place with your regular trash.

**Safe cleanup precautions:** If a CFL breaks in your home, open nearby windows to disperse any vapor that may escape, carefully sweep up the fragments (do not use your hands) and wipe the area with a disposable paper towel to remove all glass fragments. Do not use a vacuum. Place all fragments in a sealed plastic bag and follow disposal instructions above.

#### Resources for Recycling or Proper Disposal of CFLs

**NOTE: Residential recycling programs are not yet available in most regions.**

1. [Earth911.org](http://Earth911.org) (or call 1-800-CLEAN-UP for an automated hotline): Online, enter your zip code, press "GO," click "Household Hazardous Waste", then "fluorescent light bulb disposal." The site will identify your nearest residential mercury recycling facility or mail disposal method. If you find no specific information on CFL disposal, go back and click on the link for "Mercury Containing Items."
2. Call your local government if the Web site and Hotline number above does not have your local information. Look on the Internet or in the phone book for your local or municipal government entity responsible for waste collection or household hazardous waste.

Kentucky Power  
**CFL Distribution Program Study  
Community Outreach CFL Segment  
Report**



Thoroughbred Research Group  
1941 Bishop Lane Suite 1017  
Louisville, KY 40218  
[www.torinc.net](http://www.torinc.net)



# Research Methodology

## Project Background

Kentucky Power implemented a program to distribute packages of compact fluorescent lights (CFLs) to residents of their service area by making complimentary four-packs of CFLs available at various community events. In an effort to estimate the effectiveness of the program and to better understand consumer behavior related to the distribution, Kentucky Power and AEP contracted with Thoroughbred Research Group to conduct a survey among residential customers who received one or more of the four-pack CFLs for use in their homes.

Specific objectives of the research included:

- Document the extent to which the 4-pack CFLs are currently in use in homes
- Determine the types of bulbs the CFLs replaced and the wattage of bulbs replaced (if replacing incandescent bulbs)
- Measure the amount of time the CFLs are in use
- Identify where in the home the CFLs have been installed
- Determine general levels of satisfaction with the CFL distribution program

## Research Methodology

This study consisted of a telephone survey of 255 Kentucky Power customers who had received one or more of the CFL packs at a community event. Kentucky Power supplied Thoroughbred Research with a list of participating customer names and telephone numbers.

Interviews were gathered between May 17 and May 22, 2010. The questionnaire for this study was developed by the staff of AEP and Kentucky Power. Surveys averaged approximately seven minutes to complete.

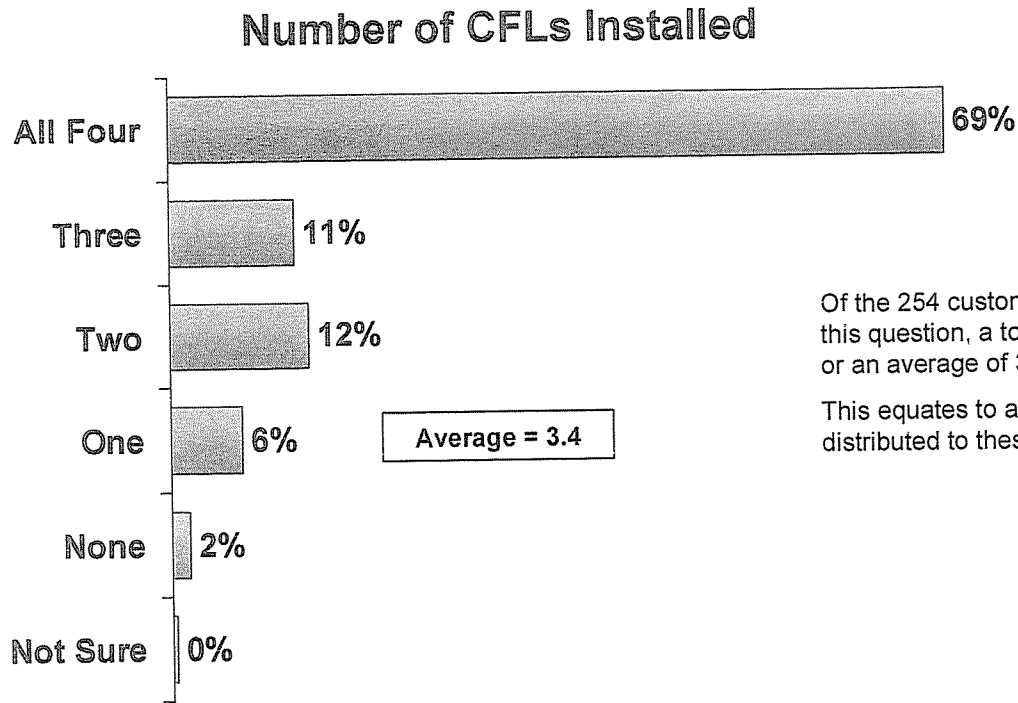
Representing a population of 2,589 unique customer households, this sample of 255 interviews produces results accurate to within no more than plus or minus 4.9 percentage points at 90% confidence.

## Key Findings

1. Among the 255 respondents in this study, we asked each respondent to detail the experience with the most recent 4-pack of CFLs they received from Kentucky Power (in the event they received more than one package). With descriptions on a total of 1,020 CFLs (255 x 4), we found that:
  - 793 of the CFLs are currently still in use in the home (78%)
  - 69 were installed but are no longer in use (7%)
  - 158 were never installed (15%)
2. More than three out of four participants reported having used the CFLs to replace one or more incandescent bulbs. About 61% of the total CFLs distributed replaced an incandescent bulb, with an average wattage of 70 watts.
3. On average, the CFLs distributed through this program that are still in use are operating 4.5 hours per day.
4. Two-thirds of the CFLs still in use are placed in three areas of the home – the living room (27%), the kitchen (22) and a bedroom (18%).
5. About half the program participants (47%) said they had already installed CFLs in their home prior to receiving this pack from Kentucky Power. These customers reported having had an average of 6.2 prior CFLs per household.
6. About one in four (27%) said they did not have any CFLs prior to receiving them from Kentucky Power, but had planned to do so; and 22% said they did not have any prior, but had since purchased additional CFLs.
7. Satisfaction is very high among program participants in terms of both the CFLs they received (97%) as well as the promotion as a whole (97%).

**Number of CFLs Installed**

Nearly seven out of ten customers reported having installed all of the CFLs they received from Kentucky Power. Only 2% reported they had not yet installed any of the CFLs.



Of the 254 customers who provided an answer to this question, a total of 862 CFLs were installed, or an average of 3.4 per customer.

This equates to approximately 85% of the CFLs distributed to these customers.

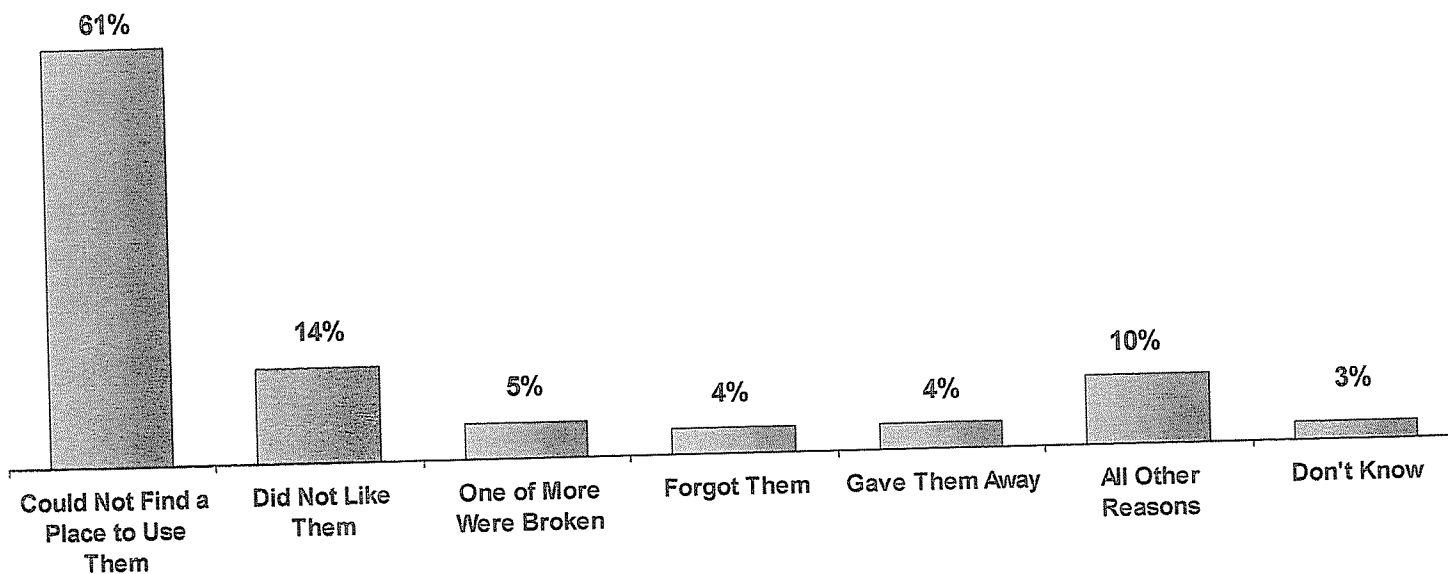
Base: All Respondents (n=255)

### Reasons for Not Installing All CFLs

The 79 respondents (about 31% of the total sample) who did not install all four of the CFLs they received were asked why they had not used all four bulbs.

The dominant reason was not being able to find a place in the home to use all of the bulbs (mentioned by 61%). Another 14% of this group said they did not like the CFLs, while 5% reported that one or more of the CFLs they received were broken.

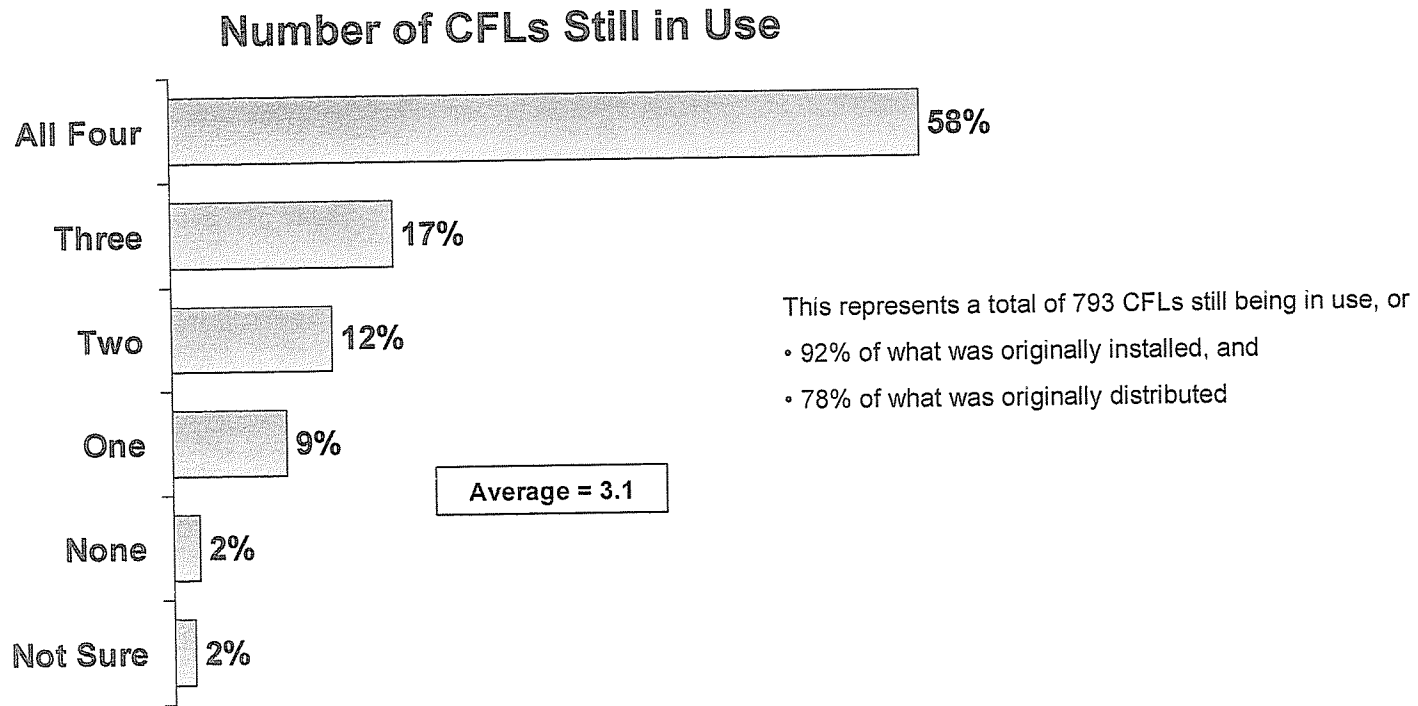
### Reasons for Not Installing All CFLs



Base: Those who did not install all four CFLs (n=79)

### Number of CFLs Still in Use

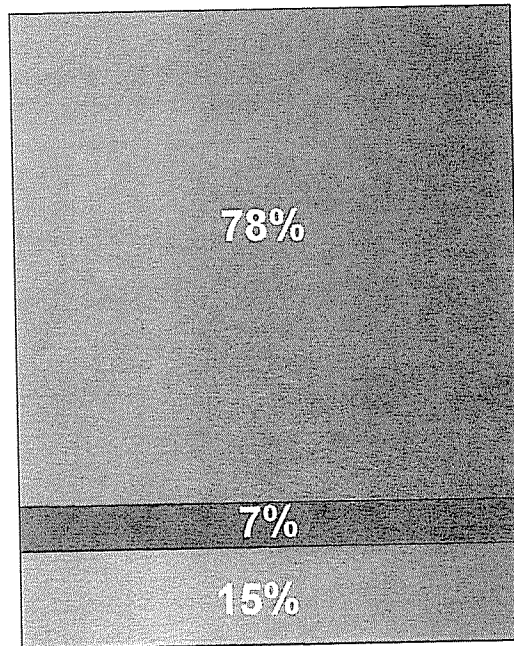
Among those who originally installed at least one of the CFLs they received, well over half (58%) say all four CFLs are still in use in their homes. Only 2% reported none of the bulbs they had originally installed are still in use.



Base: Those who installed one or more CFLs (n=250)

# Net Distribution, Installation and Use

1,020 CFL Bulbs  
Distributed



The results of this survey indicate that 78% of the CFLs Kentucky Power distributed through community events are currently being used in customers' homes.

Still in Use = 793

Installed, No Longer in Use/Not Sure if In Use = 69

Never Installed/Not Sure if Installed = 158

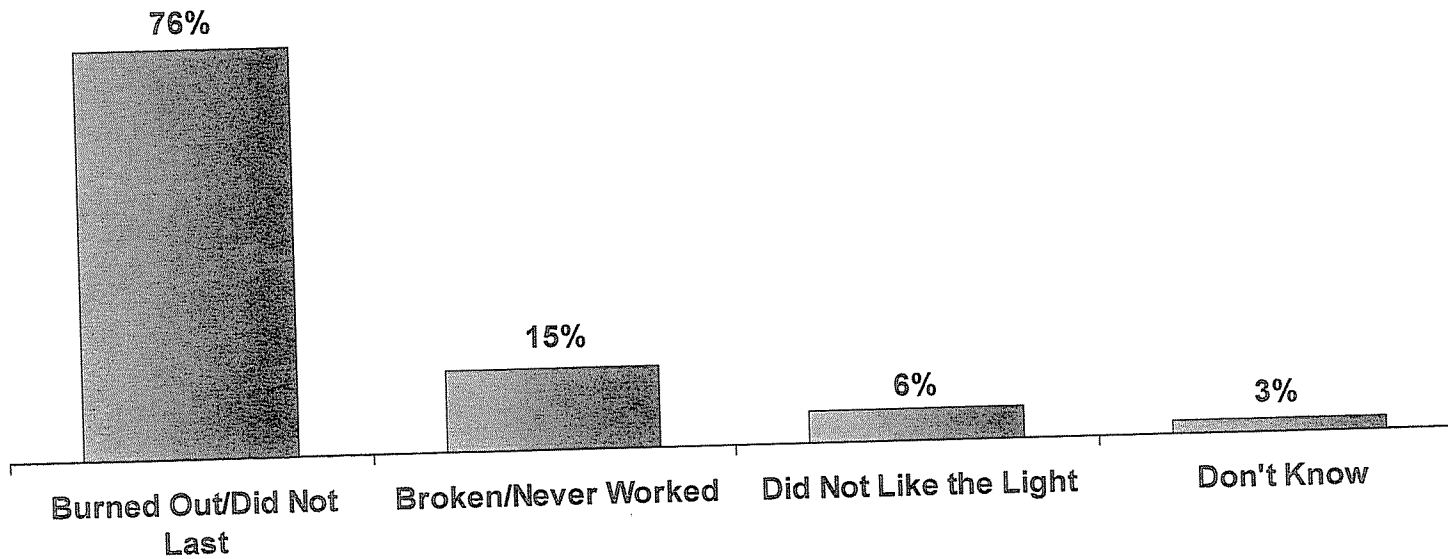
Base: All respondents (n=255)

**Reasons for CFLs No Longer in Use**

The 33 respondents who reported that one or more of the CFLs they originally installed are no longer in use in their home, the primary reason is that the bulbs had burned out and no longer work (mentioned by 76% of this group).

Another 15% said the bulbs were broken or never worked at all. Only 6% say they did not like the light the CFLs produced.

**Reasons for CFLs No Longer in Use**



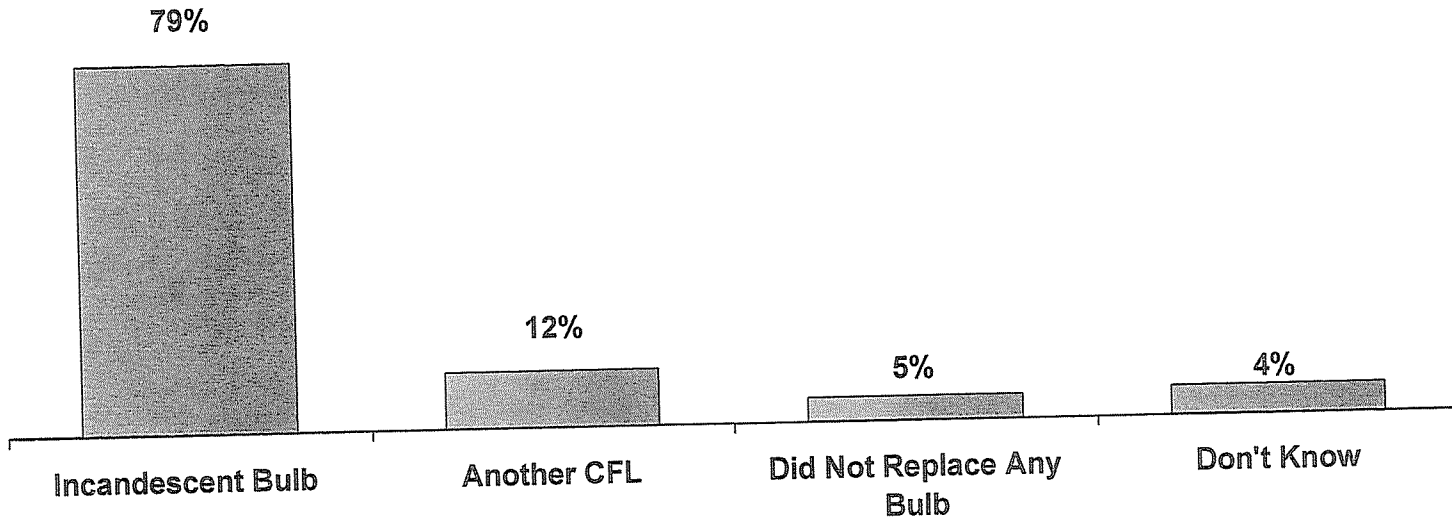
Base: Those who installed one or more CFLs no longer in use (n=33)



**Type of Bulb Replaced**

More than three out of four reported they used the CFLs they received from Kentucky Power to replace an incandescent light bulb in their home. Twelve percent replaced another CFL in the home, and 5% said the bulbs they received did not replace any previous bulbs in the home.

**Type of Bulb Replaced**



Base: Those with one or more installed CFLs still in use (n=245)





**Wattage of Incandescent Bulbs Replaced**

Those who used the CFLs they received from Kentucky Power to replace one or more incandescent bulbs in their homes (189 of the 255 survey participants) were asked to detail the wattage of each bulb replaced. In total, these respondents gave responses for 623 light bulbs.

Excluding "don't know" responses, 54% of the CFLs replaced a 60-watt incandescent bulb, 21% replaced a 100-watt bulb and 19% replaced a 75-watt bulb.

**Wattage of Incandescent Bulbs Replaced**

	Number	Percent of All Responses	Percent of Known Wattage
15 Watt	1	< 0.5%	< 0.5%
40 Watt	28	4%	5%
50 Watt	2	< 0.5%	< 0.5%
60 Watt	327	52%	54%
70 Watt	2	< 0.5%	< 0.5%
75 Watt	118	19%	19%
100 Watt	128	21%	21%
110 Watt	1	< 0.5%	< 0.5%
3-way Bulb (60-75-100)	2	< 0.5%	< 0.5%
Don't Know	14	2%	
<b>Total</b>	<b>623</b>	<b>100%</b>	<b>100%</b>

In total, these 623 CFLs replaced a 70-watt incandescent bulb on average.

The 623 bulbs detailed in the table at the left represent 61% of the total CFLs distributed, and 79% of the total CFLs still in use.

Base: Those who replaced one or more incandescent bulbs with a CFL (n=189)

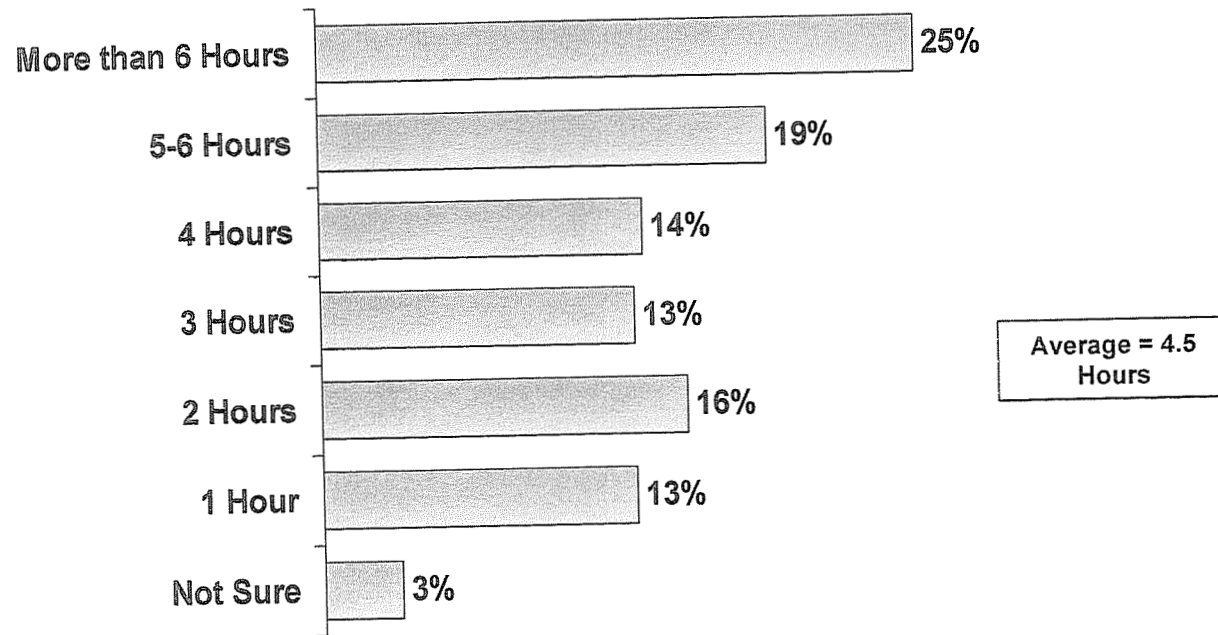


**Hours in Use**

Respondents with one or more of the CFLs still in use in their home were also asked to how long each bulb is typically used each day in the home.

When aggregating the responses for all 793 CFLs described in this survey, the average daily use was 4.5 hours per CFL still in use.

**Hours CFLs Are in Use**



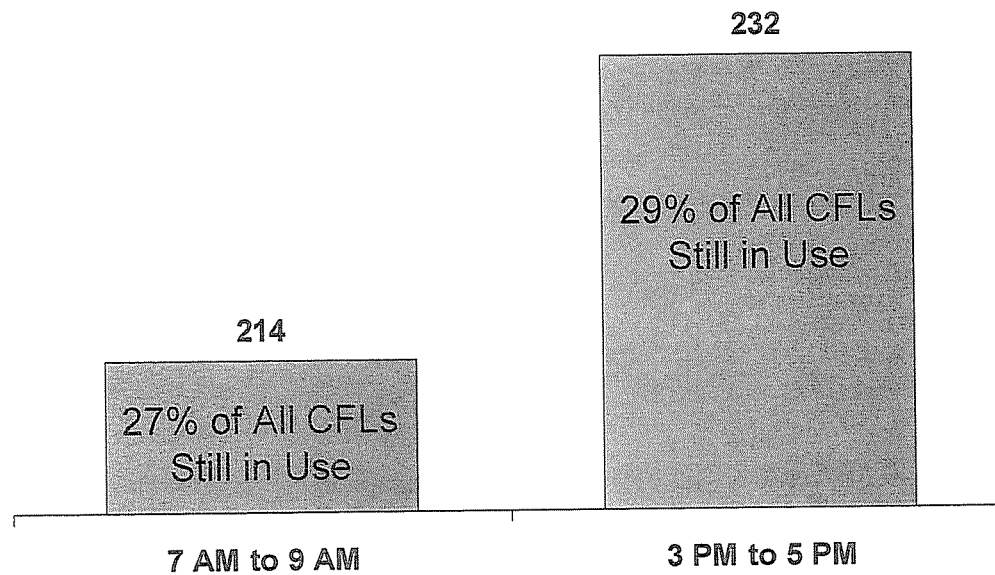
Base: Those with one or more CFLs still in use (n=245)

**Peak Hour Use**

Of the 793 CFLs described in this study, 214 bulbs (or 27%) were reported to be in use during the morning peak period of 7:00 AM through 9:00 PM

Respondents reported 232 bulbs (or 29%) in use for the afternoon peak time period of 3:00 PM through 5:00 PM.

**Bulbs in Use During Peak Times**



Base: Those with one or more CFLs still in use (n=245)

**Placement of CFLs in Home**

Of the 793 CFLs still in use, about two-thirds are used in three areas of the home – the living room (27%), the kitchen (22%) and a bedroom (18%).

**Where in Home CFLs are Used**

	Number	Percent of All Responses	Percent of Known Placements
Living Room	212	27%	27%
Kitchen	175	22%	22%
Bedroom	139	18%	18%
Bathroom	90	11%	11%
Family/TV Room	51	6%	7%
Outside	31	4%	4%
Entry Hall	25	3%	3%
Dining Room	21	3%	3%
Laundry Room	12	2%	2%
Home Office	11	1%	1%
Garage/Basement	10	1%	1%
Utility Room	3	<0.5%	<0.5%
Other	4	1%	1%
Don' Know/No Answer	9	1%	
<b>Total</b>	<b>793</b>	<b>100%</b>	<b>100%</b>

← 67%

Base: Those with one or more CFLs still in use (n=245)



### Experience with Other CFLs in the Home

Nearly half (47%) reported having had CFLs installed in their home prior to receiving the four-pack from Kentucky Power. Of this group, the average number of previously installed CFLs in the home was 6.2 bulbs.

### Other CFLs in the Home

Other CFLs in Home Prior to Receiving 4-Pack from Kentucky Power	47%
<i>Average Number of Previously Installed CFLs</i>	6.2
No CFLs Prior to Receiving 4-Pack from Kentucky Power	53%
• But were planning on getting CFLs	27%
• Have purchased additional CFLS since	22%

Base: Those with one or more CFLs still in use (n=245)

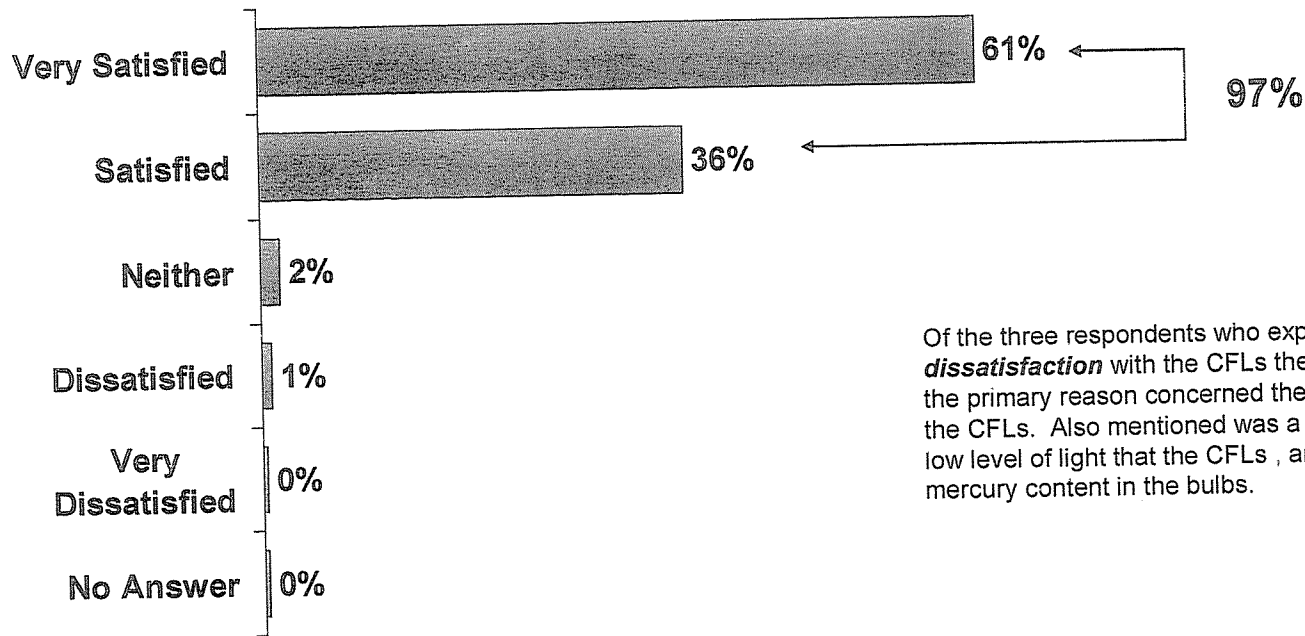
The remaining 53% reported they did not have any CFLs in their home prior to receiving some from Kentucky Power.

A total of 27% said they were planning on buying some, and 22% said they have since bought additional CFLs for their home.

**Satisfaction with CFLs Received**

Satisfaction with the CFL distribution program among participants is very high. Ninety-seven percent expressed being satisfied with the CFLs they received from Kentucky Power, with 61% indicating they are "very satisfied".

**Satisfaction with CFLs from Kentucky Power**



Base: Those with one or more CFLs still in use (n=245)



**Verbatim Comments:**

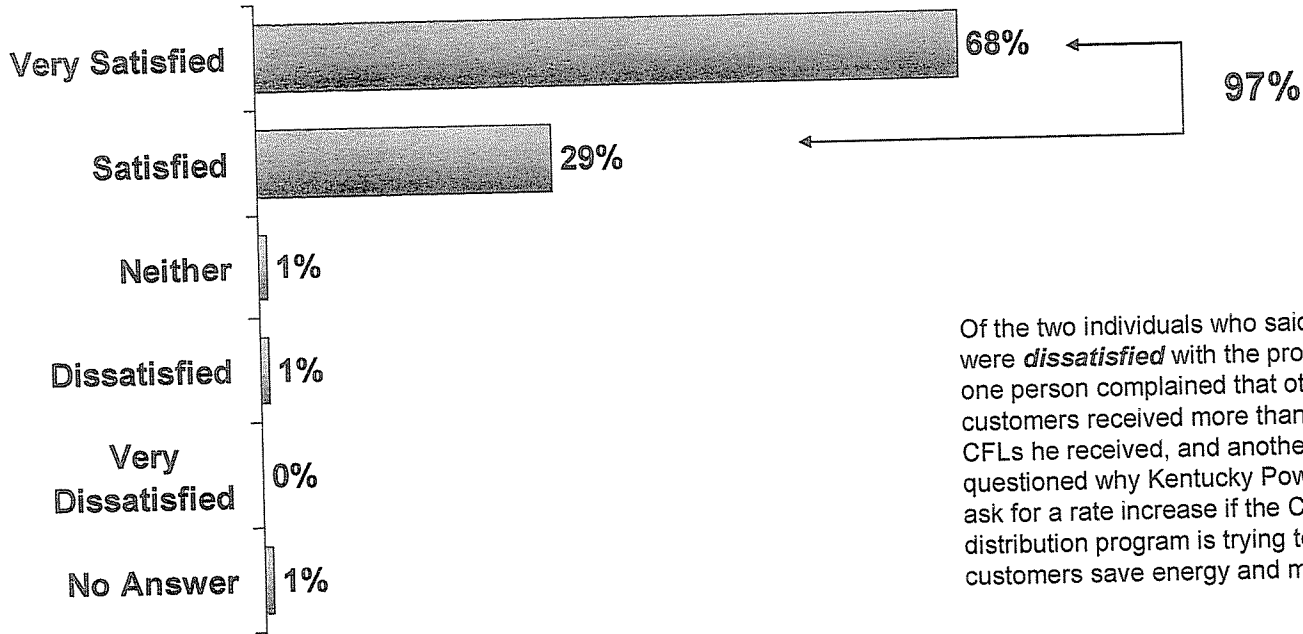
***“Why were you dissatisfied with the CLFs you received from Kentucky Power?”***

- “The longevity. The price of them. The energy efficiency. That’s about it.”
- “The short life span. And the low illumination. That’s about it.”
- “They used to be made in Kentucky and now they’re made in China. They didn’t last that long either. I heard they are mercury-based and you have to be careful when you dispose of them. The politicians are asking for a 35% raise and its making the power company filthy rich. It’s about making them rich. That’s all.”

**Overall Satisfaction with Program**

Likewise, overall satisfaction with Kentucky Power's CFL program is very high. Ninety-seven percent expressed satisfaction with the program, with over two-thirds (68%) saying they are "very satisfied".

**Satisfaction with CFL Program**



Of the two individuals who said they were *dissatisfied* with the program, one person complained that other customers received more than the four CFLs he received, and another questioned why Kentucky Power would ask for a rate increase if the CFL distribution program is trying to help customers save energy and money.

Base: Those with one or more CFLs still in use (n=245)



**Verbatim Comments:**

***“Why were you dissatisfied with this program from Kentucky Power?”***

- “Because some of the people got eight, ten, twelve bulbs and I only got four and I don’t understand the reasoning why.”
- “The political reasons. If they passed out all of these light bulbs that are supposed to be energy efficient and if it’s saving energy so much, why are they asking for a 35% raise in Kentucky? No, that’s it.”

## Appendix C - Energy and Demand Impact Analysis

### GENERAL INFORMATION:

Number of Participants or Four-Packs of 23 Watt CFLs Provided: 3,744

Number of 23 Watt CFLs Provided:  $4 \times 3,744 =$  14,976

Life of 23 watt ENERGY STAR® CFL: 10,000 Hours

### PARTICIPANT FOLLOW-UP SURVEY RESULTS:

Sample Size: 255 (90% confident level +/- 5% error) or 1,020 CFLs

Percent of CFLs Installed: 85% of the CFLs (862 bulbs) or 3.38 bulbs per participant

Percent of Persistence: 78% of the CFLs still in place (793 bulbs) or 3.11 bulbs per participant;

15% of the CFLs were never installed (158) mainly because no application;

7% of the CFLs were removed (69) due to burning out/did not last (69)

Percent of Free riders: 27%

Weighted Average of Wattage of Incandescent Bulbs Replaced by 23 Watt CFLs: 70 watts

79% of the participants used their CFLs to replace Incandescent bulbs (623 of 793)

12% of the participants replaced another CFL, assuming net change in load

5% of the participants reported no replacements

4% of the participants did not know

Average Daily Hours of Use of the CFL's installed: 4.5 hours per day

Percent of Hours of Use during Peak Hours:

Winter Peak Range Hours (7:00 – 9:00): 27%

Summer Peak Range Hours (15:00 – 17:00): 29%

Placement of CFLs in Home: 27% living room; 22% kitchen; 18% bedroom

## Appendix B - Energy and Demand Impact Analysis

### CALCULATION OF ENERGY SAVINGS:

Average Hourly Energy Savings per bulb (watts):

$$70 \text{ watts (Incandescent bulb replaced)} - 23 \text{ watts (CFL)} = 47 \text{ watt savings per bulb}$$

Average Daily Energy Savings per bulb (watt hours):

$$47 \text{ watts} \times 4.5 \text{ hours/day} = 211.5 \text{ watt hours per bulb}$$

$$\text{Measure Life: } 10,000 \text{ hours} / (4.5 \text{ hours/day} \times 351 \text{ days/year}) = 6.33 \text{ years}$$

Annual Energy Savings per bulb (kWh):

$$211.5 \text{ watts} \times 351 \text{ days/year (assuming 2 weeks vacation)} / 1000 = 74.24 \text{ kWh}$$

Total Annual Energy Savings per Participant (kWh) w/Persistence & Incandescent bulb replacement:

$$4 \text{ bulbs/participant} \times (623 \text{ bulbs}/1020 \text{ bulbs}) \times 74.24 \text{ kWh/bulb} = 181.38 \text{ kWh/participant}$$

Total Program Annual Energy Savings (kWh) w/Persistence & Incandescent bulb replacement:

$$\text{By Bulbs: } (623 \text{ bulbs}/1020 \text{ bulbs}) \times 14,976 \text{ bulbs} \times 74.24 \text{ kWh/bulb} = 679,081 \text{ kWh}$$

$$\text{By Participant: } 3,744 \text{ Participants} \times 181.38 \text{ kWh/participant} = 679,081 \text{ kWh}$$

Net Program Energy Savings (kWh) with free riders:

$$679,081 \text{ kWh} \times (1.0 - .27) = 495,729 \text{ kWh}$$

Net Program Energy Savings (kWh) with 8.7% T&D Losses:

$$495,729 \text{ kWh}/1000 \times 1.087 = 538.9 \text{ MWh}$$

## Appendix B - Energy and Demand Impact Analysis

### CALCULATIONS OF DEMAND REDUCTION:

Peak Winter Demand Reduction per Participant (Watts) w/Persistence & Incandescent replacement:

$$47 \text{ watts} \times (623 \text{ bulbs}/1,020 \text{ bulbs}) \times 4 \text{ bulbs/participant} \times .27 \text{ CF} = 31.00 \text{ watts/participant}$$

Total Program Net Winter Peak Demand Reduction (kW) w/Free riders:

$$31.00 \text{ watts/participant} \times 3,744 \text{ participants} \times (1.0 - .27) = 84,726 \text{ watts}/1000 = 84.73 \text{ kW}$$

Total Program Net Winter Peak Demand Reduction (kW) with 10.8% T&D Losses:

$$84.73 \text{ kW} \times 1.108 = 93.88 \text{ kW}$$

Peak Summer Demand Reduction per Participant (Watts) w/Persistence & Incandescent replacement:

$$47 \text{ watts} \times (623 \text{ bulbs}/1,020 \text{ bulbs}) \times 4 \text{ bulbs/participant} \times .29 \text{ CF} = 33.30 \text{ watts/participant}$$

Total Program Net Summer Peak Demand Reduction (kW) with free riders:

$$33.30 \text{ watts/participant} \times 3,744 \text{ participants} \times (1.0 - .27) = 91,013 \text{ watts}/1000 = 91.01 \text{ kW}$$

Total Program Net Summer Peak Demand Reduction (kW) with 10.8% T&D Losses:

$$91.01 \text{ kW} \times 1.108 = 100.84 \text{ kW}$$